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ABSTRACT

Trade unions and collective bargaining can shape the compensation and opportunities for advancement of workers. The economic outcome at the work place of union activity affects compensation levels, lifetime economic advancement, and the structure of employment. The success or failure of trade unions often depend on the manipulation of economic constraints outside the bargaining relationship, such as control over entry into the labor market, restrictions on non-union competition, and regulation of product markets. While unionization generally raises earnings, its effects are particularly strong for poorly educated workers and black males. Unions stabilize work through systematic assignment of apprentices, more regular employment of older workers, redistribution from the senior to the less senior, and the reduction of voluntary turnover. (MS)

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Peter B. Doeringer
Harvard University

August, 1973

EXPLORATIONS IN LOW PAY, COLLECTIVE BARGAINING AND ECONOMIC MOBILITY

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Summary of Findings, Conclusions and Recommendations

I. Unions and Economic Structure

The economic outcome at the workplace of union activity can be divided into three related areas: (1) the effect upon compensation levels, (2) the effect upon lifetime economic advancement, and (3) the effect upon the structure of employment. While trade unions appear to devote much of their efforts to obtaining such benefits through direct bargaining with employers, their success or failure in such endeavours will often depend on the manipulation of economic constraints outside the bargaining relationship.

The specific economic strategy selected will depend upon the circumstances of each bargaining relationship -- the type of skill, the nature of the production process, and the mechanisms available to regulate product and labor market competition. Craft labor markets, enterprise markets in manufacturing, and service work will each encourage different union strategies, but conditions in service employment should be less amenable to union activity than in enterprise or craft situations. Where unions are successful in effecting economic change, however, offsetting adjustments may occur in worker quality.

The empirical findings of this report are consistent with this analysis. While unionization generally raises earnings, its effects are particularly strong for those poorly educated workers and for black males who obtain unionized employment.

Unionization also improves lifetime economic mobility in craft and production work through adjustments in lifetime earnings profiles and by redistributing employment stability. In services , unionization does contribute to earnings, but the effects are not as large.

A second major finding of the study is that unions affect the larger structure of the employment relationship. In craft employment where work is irregular, unions stabilize work through systematic assignment of apprentices and by providing more regular employment for older workers. In production work, there is evidence of a redistribution of employment instability from the more senior to the less senior. In the building service and health sectors where work is not inherently unstable, longevity-related pay and fringe benefits, along with higher levels of pay and better working conditions, have contributed to the reduction of voluntary turnover.

Inter-country comparisons

A review of the experience with collective bargaining in a number of countries sheds further light upon the relationship among low pay, unionization and upward mobility. It appears that widely different systems of labor markets and industrial relations arrangements yield recognizable patterns of labor market duality similar to those found in the United States. In each country, however, duality does assume a slightly different configuration. In Sweden and Britain it is less sharply delineated than in the United States and Japan. And these differences in duality carry implications for the overall distribution of income and sometimes for the efficiency of the industrial relations system.

II. Industrial Relations and Labor Market Policies

When devising national policies for low pay, two distinct types of labor market and industrial relations strategies can be discerned in the countries studied. The first is to make the labor market more open and competitive by encouraging inter-firm labor mobility and replacing internal promotion systems with career ladders based on external mobility. This approach greatly facilitates the management of the labor market through formal programs operated by government authorities.

But this strategy can only be successful in an economy operating permanently at full employment. Making the labor market more competitive may challenge the underlying economic rationality of internal markets by accelerating economic dislocation. When such conflicts occur, labor market policy is likely to be resisted by labor and management at the workplace.

The alternative is the internalization of the labor market. This entails enhancing the job security and economic advancement of workers through stabilizing employment and providing promotion opportunities within enterprises. Under this sytem the enterprise is the critical unit for manpower utilization and training, and economic benefits for the internal work force are determined at the enterprise level. Market competition occurs only at the limited hiring points.

The major disadvantage of internalization is that it can create a distinction between those workers who have gained access to enterprises providing good advancement prospects and those who have not; this distinction may widen, in essence aggravating the dual market problem.

Although the internal labor market is not the sole source of economic advancement in the primary sector, it is an important (and probably increasing) factor in the course of industrialization. If low pay is to be remedied, it must involve either the transfer of workers from the secondary to the primary sector, or the restructuring of secondary employment to make it more like the primary sector. In short, a combination of external and internal market policies must be followed.

At the national level both approaches require a policy of continued full employment. This is essential both to increase the opportunities for primary-type, career employment and to discourage the internalization of the labor market solely to protect workers against economic insecurity.

At the micro level, the major responsibility of external market programs directed at the low pay problem should be the transfer of workers from secondary to primary employment. Internalization must focus on both the primary and secondary sectors.

The most that can be said at this stage in our understanding of labor market behavior is that access to career employment opportunities characterized by internal training and upgrading is an important avenue for raising lifetime incomes not currently available to the low paid adult work force. This argues for considering programs for intervening selectively in the demand side of the labor market alongside more conventional supply-oriented programs of training, information, and labor mobility. These two market strategies are clearly compatible with each other.

EXPLORATIONS IN LOW PAY, COLLECTIVE BARGAINING AND ECONOMIC MOBILITY

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I

Introduction

The position of the low paid in most industrialized countries has improved relative to middle income workers, at least from the 1930's to the 1950's.[1] But this trend has not been evenly distributed among all groups of the low paid. For example, in Sweden the dispersion in the lower tail of the income distribution of male manual workers narrowed dramatically until 1960, while female manual workers experienced almost no narrowing after 1945. In the United States, the narrowing trend in the earnings distribution among all manual workers stabilized after 1949, but has begun to widen for females. A different pattern emerges in Japan. Earnings differentials were relatively stable from the immediate pre-war period until 1956, with women experiencing less earnings dispersion than males. But after 1960 there was a rapid improvement in the relative earnings of all low paid industrial workers.[2]

Observing that various groups in the labor force experience differential rates of economic advancement over time, however, tells nothing of the underlying mechanisms at work. Market forces such as changes in the composition of the labor force, in the mix of education and skill, and in the structure of labor demand have undoubtedly been a major influence. But in each country examples can also be found of institutional intervention in the structure of pay -- the solidaristic bargaining policy of Swedish trade unions that seeks to raise the incomes of the low paid, the minimum wage in the United States, wages councils in low paying sectors in Britain, and the *nenkō* pay system governing large enterprises in Japan. Little is known, however, about the extent that such institutional factors have changed patterns in earnings over time.

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[1] See H. Lydall, The Structure of Earnings, (Oxford: Clarendon Press, 1968), pp. 156, 169-170, 186.

[2] Ibid.

This study explores some of the ways in which labor market institutions, particularly trade unions and collective bargaining, affect the earnings of the low paid and their opportunities for advancement within the pay structure. The study follows directly from earlier work on internal labor markets in the United States and from the finding that high paid and low paid manual workers tend to be employed under markedly different institutional arrangements.[1] The more highly paid workers hold jobs that offer both on-the-job training and relatively predictable paths of career advancement within an institutional setting such as a large enterprise or a craft union situation. These careers tend to be defined by promotion ladders within enterprises or, as in the building trades, by training and advancement networks among a group of employers. With some exceptions, such as highly talented individuals, these training and advancement patterns are strongly associated with systems of rules governing promotions and labor mobility.[2] In contrast, the low paid seem to work in jobs and enterprises that provide little or no on-the-job training and career advancement.

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[1] See Peter B. Doeringer and Michael J. Piore, *Internal Labor Markets and Manpower Analysis* (Lexington: D.C. Heath, 1971), ch. 8.

[2] For an example of a market for talented manpower see S. Rottenberg, "The Baseball Players' Labor Market", *Journal of Political Economy,* June 1956, pp. 242-258. But even here there are institutional restrictions on pay and mobility as well.

These differences in training and economic mobility are also reflected in the industrial relations practices in the low paid sector. Whether they are stably employed or highly mobile, the low paid tend to have work patterns that are relatively less regulated by institutional rules. The low paid, are less likely to be in jobs organized by trade unions or to work in large enterprises operated under union-like industrial relations procedures.[1] Low paid sectors also tend to be characterized by low levels of product market concentration, creating the impression that market organization is generally more competitive than in high paying sectors.[2]

There are also factors other than institutional rules that distinguish the low paid and high paid sectors of the labor market. The low paid tend to be less well-educated. They are more likely to be women, young, or members of ethnic minorities. They experience higher rates of unemployment and change jobs more frequently. But it can be argued that these differences are partly derivative of disparities in training and advancement opportunities. Where pay is low, where there is little or no prospect of on-the-

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1. See James G. Scoville, "Influence on Unionization in the U.S. in 1966", Industrial Relations, October, 1971, pp. 254-361.

2. See, Robert T. Averitt, The Dual Economy: The Dynamics of American Industry Structure (New York: W.W. Norton & Co. Inc. 1968).

job training, and where discriminatory barriers to mobility can be a factor, workers lack important avenues for advancement. Where there is nothing in the employment relationship to encourage stability of employment, the predictable result is high turnover, high unemployment, and continuing low pay. But where training and advancement opportunities are present, incentives emerge for stabilizing the employment relationship curtailing supply increases, and otherwise protecting the benefits of training investments and secure employment.

Adopting the view that the labor markets of the low paid and the more highly paid are distinguished by differences in the degree of competition and institutional regulation carries implications for policies to promote economic mobility. The employment problems of the low paid cannot simply be attributed to deficiencies in skill, information, or attitude. Instead, a more complicated process is at work involving not only the acquisition of formal skills, but also access to types of employment that provide on-the-job training, satisfying and motivating work experience, and institutionally defined career patterns. It is towards this problem of access that manpower policy must be directed.

One method for achieving this goal is to upgrade the skills of workers in order to enhance their competitive position in the labor market and facilitate transition from low wage to high wage employment. Most federal manpower programs have embodied this approach.

To a limited extent such a policy has merit. Education and training have contributed to much intergenerational economic mobility, although decidedly less so for blacks than other workers.[1] But ultimately such upgrading will be limited by the job structure of the economy, and by the mobility linkages among various jobs, so that further progress will require modifications in the structure of employment and the expansion of the types of employment that provide upward mobility.

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[1] See P. Blau and O.D. Duncan, The American Occupational Structure, (New York: Wiley, 1967).

Little is known at present about how to redesign or stimulate the structure of jobs in such a selective manner. Attempts to create "new careers" in non-profit employment have not met with general success.[1] Current experiments in job satisfaction and job enrichment may provide some insights into the design of work, although the experience to date is mixed at best.[2] But it is clear that any such policy will require intervention in the industrial relations arrangements governing patterns of hiring, training, job assignment, wage determination and job content. Production procedures and patterns of industrial organization may need to be modified as well.

Determining the potential for such intervention requires a better understanding of how institutional and market factors have interacted to affect mobility in the past, and particularly of how industrial relations practices have affected upward mobility at the work place. Within this framework, the study of trade unions and collective bargaining can no longer concentrate upon economic effects at a point in time in an otherwise competitive

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1. See A. Levitan , et. al. Human Resources and Labor Markets (New York: Harper and Row, 1972) pp. 347-350.

2. See U.S. Senate, Committee on Labor and Public Welfare; Work In American, Report of A Special Task Force to the Secretary of Health, Education and Welfare (Washington: U.S. Government Printing Office 1973) Chs. I, II, IV.

market.[1] Unions must be recognized not only as economic agents operating within a set of market constraints, but also as institutions acting directly upon these market constraints through economic and political instruments, and as political units for determining the distribution of benefits obtained. Similarly, collective bargaining, and industrial relations more generally, should be analyzed as part of a dynamic process giving expression to economic and social pressures while at the same time structuring market relationships and affecting the distribution of earnings within the work force.

With this in mind, some of the relationships among industrial relations, low pay, and economic mobility are explored in this report. In Chapter II, various analytical approaches for understanding industrial relations and economic mobility are examined. Chapter III reports a case study of collective bargaining and economic mobility in the low paid service sector. In Chapter IV, quantitative evidence on the impact of unionization on wages and economic mobility is presented. Chapter V explores the effects of different national systems of industrial relations upon economic mobility by comparing the United States experience with that of Britain, Sweden and Japan. Recommendations for policy and research are proposed in the concluding chapter.

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[1] See also John T. Dunlop, Wage Determination Under Trade Unions, (New York: The MacMillan Co., 1944), Chs. I, II, IV.

II

Policy Models for the Labor Market

Because certain characteristics of the labor supply -- education and race, for example -- and certain characteristics of jobs -- lack of on-the-job training and dead-end employment -- are associated with low pay, it is important to specify in a formal way how these characteristics are related. There are three principal explanations in the economic literature: competitive market models, queue models, and segmented market models. In this Chapter, these three models, and their usefulness for understanding low pay and economic mobility are briefly reviewed.

I. Competitive Market Models: Human Capital and Wage Competition

The competitive or market model focuses upon the skill and productivity of individuals as key variables in wage determination. Wage differentials are determined through the interaction of the supply and demand for various types of skill and reflect differences both in productivity among individuals and in non-monetary advantages among jobs. Thus wages are both a reward to skill, a compensating factor for working conditions, and a signal controlling skill acquisition and labor mobility. For wages to function efficiently in these roles, there must be a general market for each category of skill, wage rates must freely fluctuate with changes in supply and demand, and labor must be relatively mobile among employments.

According to this model, the distribution of earnings, both at a point in time and over a worker's life, is principally related to varying human capital endowments, and to the time pattern of investment in such capital. Low pay is then symptomatic either of deficiencies in training and ability, or of learning on the job in which earnings are being foregone as part of a training investment.[1]

This view has considerable intuitive appeal since it corresponds closely to much personal experience. Earnings rise with education and lifetime earnings patterns seem to follow a pattern consistent with investment theory. It also finds support in many recent studies of the relationship among age, education and earnings. In general, workers with more education earn more during their lifetimes, and also seem to accumulate more on-the-job training than do those with less education.[2] Thus education becomes the cornerstone for earnings--contributing to productivity in its own right and also facilitating access to on-the-job training. For the analysis of life-time earnings, this implies widening earnings differentials over time between poorly educated and the well educated cohorts. Under this model, economic mobility is enhanced principally through additional investments in human capital.

On the other hand, there are certain limitations to this approach. For example, it can be shown that some workers -- particularly blacks and women -- are not able to translate schooling into income as readily as white males.[3] Moreover, blacks and women experience less improvement in earnings than white males after entry into the labor market. This suggests that discrimination interferes with market pricing and distorts training and employment decisions.

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[1] See Gary S. Becker, Human Capital (New York: Columbia University Press, 1964).

[2] See for example, J. Mincer, "Investment in Human Capital and Personal Income Distribution", Journal of Political Economy, August 1958, pp. 281-304 and T.W. Schultz, Investment in Human Capital: The Role of Education and Research (New York: Free Press, 1971).

[3] J. Mincer, "On-the-Job Training: Costs, Returns, and Some Implications", Journal of Political Economy, Supplement October 1962, pp. 50-79.

A second limitation with the market approach is that it typically is concerned more with equilibria in disaggregate labor markets than with the processes through which markets seek to reach equilibrium.[1] For some purposes this neglect of adjustment processes may not be important, but for labor market policy it may impart a serious bias particularly if wages are treated as an important adjustment factor. There is, for example, considerable evidence that wage variation is not as flexible an adjustment variable as the competitive market model often implies and that substantial labor reallocation occurs within a rigid wage structure, suggesting that market adjustment may well occur largely through quantity and quality changes.[2] Moreover wages are often assigned to categories of jobs rather than to individual workers and job changing tends to be concentrated among a relatively small section of the labor force moving between entry level jobs.[3] This can lead to wages becoming somewhat independent of the skill and productivity characteristics of the workers who hold them. Constraining wage adjustment is likely to alter market equilibria and to limit the usefulness of market models as a guide to policy.[4]

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[1] For a major exception see Richard B. Freeman, The Market For College Trained Manpower, (Cambridge: Harvard University Press, 1971).

[2] See OECD, Wages and Labour Mobility (Paris: OECD 1965).

[3] See Peter B. Doeringer and Michael J. Piore, Internal Labor Markets and Manpower Analysis (Lexington: D.C. Heath, 1971) Ch. 4 and OECD op. cit.

[4] This may explain some of the difficulty in accounting for much of the variation in individual earnings that is often attributed to unmeasured or poorly measured factors such as ability.

Recognizing these limitations calls into question the interpretation of observed relationships among education, on-the-job training, ability and compensation. Do earnings reflect differences in skill and education or are these differences partly derived from non-wage rationing decisions used to distribute workers within a somewhat rigid wage and job structure? How do discrimination and occupational segregation affect relative wages and access to on-the-job training? Why are wage adjustments constrained and in what parts of the labor market?

II. Queue Models of Job Competition

If it is assumed that wage structures, and *a fortiori* the job structure, are held constant, at least in the short term, then competitive forces must resolve themselves through other adjustment mechanisms.[1] One adjustment process often posited is that an aggregate rationing process occurs reflecting micro-economic decisions by employers to "hire the best workers available". Jobs ranking high on the queue in terms of wages, career prospects and working conditions will be preferred by workers and an excess supply of workers will compete for these "scarce" jobs. Because wage structures are fixed, however, wage competition does not reduce wages in response to this surplus of applicants. Instead, employers adjust hiring and recruitment standards in selecting from the labor pool.[2] Workers not hired at the top of the queue compete for less and less desirable jobs until, at the bottom of the queue, the least preferred workers become unemployed and the least attractive jobs remain vacant. This queuing process is competitive, but the adjustment process involves shifts along the queue through labor mobility and changes in hiring, training, and promotion practices. For policy, the queue model encourages training and anti-discrimination programs to affect the position of workers in the queue. It also suggests that wage differentials can be modified without necessarily disturbing the allocation of labor.

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[1] Lester C. Thurow, "Education and Economic Equality", *Public Interest* Summer 1972, pp. 66-81, and National Commission on Technology, Automation and Economic Progress, *Technology and the American Economy*, Vol. 1, February 1966, p. 23.

[2] Doeringer and Piore, *op. cit.*, Ch. 5.

The queue model can be certainly said to characterize the labor market in the short run where wages and factor adjustments do not occur. It is also applicable where wage differentials are rigid or when they are established by some historical or exogenous process, as they often appear to be at the enterprise level. Where the queue theory is most vulnerable, however, is in moving from the micro-level to the aggregate, since it could be argued that competition among enterprises would prevent the constrained adjustment process from departing substantially from competitive pricing and employment norms. But even at the aggregate level it can be argued that evidence relating education, income and employment structure are more consistent with a demand oriented, queue model than with a supply oriented competitive model.[1]

III. Segmented Labor Market Models

Viewing the labor market as unitary, being either freely competitive or operating under conditions of constrained competition, neglects the possibility of there being sub-markets operating under different rules. Some types of labor markets may conform closely to the fully competitive model, while others may be dominated by wage rigidities and queuing behavior. If sub-markets arise, what factors contribute to their creation and continued existence? And, what is their effect upon earnings and economic mobility?

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[1] Thurow, "Education ...", *op. cit*.

The presence of sub-markets has been recognized in a variety of forms in the labor market literature, usually as part of the study of wage determination or of earnings differences. These sub-markets have traditionally been defined in terms of supply characteristics--socio-economic class, geographical area, unionization, or occupation. Demand considerations may also enter into the definition of sub-markets as when concentrated industries pay higher wages. Within the framework of the competitive model, sub-markets are considered symptomatic of (a) short-term disequilibria arising from lags in training and labor mobility; (b) market imperfections such as lack of information; (c) non-competing groups; or (d) unmeasured factors such as ability, different employment preferences, or non-monetary benefits. In many instances it can be shown that trends in employment and earnings support the interpretation of disequilibria working themselves out. Regional wage differentials narrow in the face of migration, quality adjustments transforming union wage effects into quality effects, and so forth.

But there are sub-markets, such as those by race and sex, that persist for such long periods that they deserve to be considered more permanent divisions in labor markets.

Internal Labor Markets

More recently there has been interest in the enterprise as a sub-market.[1] Some enterprises have "open" internal labor markets, hiring workers directly into most job classifications, and providing little opportunity for training or promotion. Others have "structured" internal labor markets, hiring workers into a limited number of entry jobs while relying upon training and promotion to staff the majority of the remaining jobs.

The structure of enterprise markets depends to a large degree on the types of skills required. Where skills are general, jobs will ordinarily be filled directly from the external labor market and the rational enterprise will not invest in training.[2] But where enterprise-specific skills are required, the enterprise will invest in training, develop on-the-job training and promotion sequences, and rely upon the external market mainly for unskilled or generally skilled workers.

When enterprise investments in training and other costs of acquiring a work force are minimal, the employer is largely indifferent to turnover. But where enterprises invest heavily in specific training, labor turnover is of paramount concern as it curtails the payoff period of the investment and imposes replacement training costs. Thus, specific training encourages enterprises to recruit workers who are quick to learn and who have a low probability of quitting. In order to ensure recruitment selectivity in the external labor market and to provide the incumbent work force with incentives for continuity of employment, such enterprises will offer not only promotion and training, but premium wages and working conditions as well. On the other hand, enterprises that do not invest in training need not develop employment policies that favor selectivity and retention.[1]

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[1] Doeringer and Piore, op. cit. See also Clark Kerr, "The Balkanization of Labor Markets" in E. Wight Bakke, et. al. Labor Mobility and Economic Opportunity (Cambridge, Mass: Technology Press of MIT, 1954), pp. 92-110 and John T. Dunlop, "Job Vancancy Measures and Economic Analysis" in The Measurement and Interpretation of Job Vacancies: A Conference Report, NBER (New York: Columbia University Press, 1966).

[2] Enterprise-specific training is defined as training which enhances productivity only in the enterprise that provides it, in contrast to general training which increases productivity in a number of employments. See Gary S. Becker, Human Capital (New York: Columbia University Press, 1964), p. 18.

Trade Unions and the Internal Labor Market

While on-the-job training investments and other fixed employment costs are major factors contributing to employment stabilization and internal advancement, institutional influences may also play a role.

Trade unions and collective bargaining are important in shaping internal labor markets. In attempting to raise earnings, unions operate not only upon wage rates, but upon the stability and security of employment for incumbent workers. They bargain about training, advancement and the level and distribution of employment opportunities for their members through control over apprenticeship, restrictions on layoffs, limitations on sub-contracting, requirements for promotion from within, and pressure to broaden avenues for internal mobility. Over time--through changes in wages, in the penalties for layoff and discharge, and in the incentives for promotion from within--collective bargaining and industrial relations arrangements in larger non-union enterprises extend and reinforce the underlying economic logic of the internal labor market. Employment is further stabilized, incumbent workers gain added advantages, selectivity and the control of entry into the internal labor market becomes more important.

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[1] Peter B. Doeringer and Nicholas Bosanquet, "Is There a Dual Labor Market in Great Britain?", Economic Journal, June 1973, Walter Y. Oi, "Labor As a Quasi-Fixed Factor" The Journal of Political Economy, December 1967, pp. 535-555, and Doeringer and Piore, op. cit.

Moreover, the continued association of workers in a stable employment relationship produces a situation in which custom and work place equity join economic return as important concerns of workers. Because workers must cooperate not only with production, but with the provision of training as well, compensation and the allocation of training opportunities must be consistent with both work place custom and equity if manpower is to be trained and utilized efficiently within the enterprise. Since the preservation of custom and equity within stable work relationships require the careful balancing of individual preferences with collective interests, trade unions often become more than mere agents of market power. They become coordinators, codifiers, and regulators of custom and equity as well as instruments for the advancement of economic interests of workers. Stable work groups, therefore, have given unions a wider role in work place activities. They have also facilitated trade union organization by lowering the costs of recruiting and maintaining membership. As a result, union organization and union-like industrial relations practices are most likely to emerge where employment is stable, or can be stabilized. In turn, the presence of the union provides an additional source of rigidity in work rules by codifying custom and, at the same time, an institutional mechanism for modifying custom in a systematic way.[1]

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[1] Doeringer and Piore, op. cit.

The Dual Labor Market

A final type of labor market segmentation is the dual labor market. This term was originally conceived to describe a labor market divided into a "primary" or high wage sector and a "secondary" or low wage sector.[1] Duality rests upon two important distinctions between the operation of low wage and high wage labor markets. One distinction relates to economic structure: (1) that low wage employment is dead-end, leading to little economic advancement, and that certain groups of workers -- the less well educated, women and ethnic minorities -- tend to congregate in these jobs for long periods of time; and (2) that other workers such as better educated, white males, although they may begin their work careers in the low wage labor market, obtain types of employment that lead to economic mobility.

The second distinction relates to economic process. The low wage sector is typically characterized by small firms, little trade union organization, relatively high turnover, and casual employment relationships. With a few exceptions, neither product or labor markets in this sector are regulated by either private agreement or legislation, leaving them instead to be governed by competitive forces. In contrast, the high wage sector is often subject to regulation. Collective bargaining may determine wages and working conditions, the conditions of employment are often regulated by law, product markets are more concentrated and administered pricing is practiced, and product demand is often influenced by government policies.[2]

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1. Ibid. For a review of stratification theory see David M. Gordon, Theories of Poverty and Unemployment (Lexington: D.C. Heath, 1972).

2. See also Robert T. Averitt, The Dual Economy (New York: W.W. Norton, June 1968).

It appears that the internal labor market is a key element in the system of regulation dividing primary and secondary sectors. For example, structured internal labor markets are found mainly in the high wage, primary sector while open, unstructured internal labor markets are found more often in the secondary sector.[1] Over time, enterprise and worker behavior tend to polarize employment patterns in each sector. In the secondary sector, turnover occurs because there is no enterprise-specific training, and enterprise-specific training is inhibited by a turnover-prone disadvantaged work force. In the primary sector, opposite trends in work force stability training are likely. Thus the distinction between high wage and low wage sectors can be interpreted as a rational response by workers to differential employment opportunities , and by enterprises to both technologies requiring low levels of enterprise-specific training and to an unstable labor force.

But not all workers in the primary sector are permanently attached to structured enterprise markets. Some work in occupational markets where skills are more general and where attachment is to a skill rather than an enterprise. Within this group are some individuals whose advancement is tied to ability and the acquisition of highly transferable skills. Yet closer examination suggests that many of these occupational markets are regulated in ways analogous to those of enterprises through control of training and entry into the occupation. Examples of this can be found in some building trade unions (especially those relying heavily upon apprenticeship), health professions,printing trades, hairdressers and barbers, and accountants, to name a few.

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[1] OECD, Wages and Labour Mobility (Paris, 1965) pp, 17-18. Aggregate evidence consistent with this assertion is found in the relationship between average hourly earnings in manufacturing and quit rates.

Other Sources of Market Duality

While regulated employment systems are a major element of economic advancement in the primary labor market, there are other sources as well. Foremost among these are various forms of external regulation of both product and labor markets. These regulatory activities are used to relieve competitive constraints on wages and prices and are generally more available to employers and unions in the primary than in the secondary sector. Oligipolistic market control, regulation of international competition, control over entry into craft labor markets through apprenticeship programs and licensure, restraint of trade in product markets instigated by trade unions, product market subsidies, rate regulation, and the extension of "prevailing" union compensation levels to the non-union sector, are all examples of this phenomenon.

Sometimes the initiative for such regulation comes from employers and sometimes from trade unions. But often both parties are in accord over the desirability of achieving orderly control over their mutual market environment. Market regulation is ordinarily achieved either through private arrangements such as collective bargaining, or through political action.[1] At times where competition has been most severe, however, regulation has only been possible through extralegal means.[2]

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[1] See United Mine Workers v. Pennington 381 U.S. 657 (1965) and Local 189 Amalgamated Meat Cutters v. Jewel Tea Co. 381 U.S. 675 (1965).

[2] The major examples of illegal regulation of markets can be found in the secondary sector. For example, fur making, trucking, culinary work, and longshoring were once frequent

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IV. Career Labor Markets and Dead-End Labor Markets

The dual labor market model highlights the major differences in the training and lifetime earnings patterns between advantaged and disadvantaged workers. For labor market policy it draws attention to considerations of labor demand -- discriminatory hiring and assignment practices, and access to on-the-job training opportunities -- as well as the more customary supply-oriented programs of training and information.

However useful such an approach may be, it nevertheless requires further elaboration if it is to reflect accurately the mixture of competitive and non-competitive processes in the labor market. For example, the secondary sector contains workers who elect to be employed there, as well as those who are confined to it by virtue of discrimination or lack of skill. In the primary sector, not all workers have career mobility, and some parts of this sector are highly competitive and unregulated. The dual labor market model also suggests a greater degree of technological determinism in skill and job structures than may in fact be the case.

These problems can be reconciled if the dual labor market model is understood as a special case (most relevent for problems of low pay) of a more general distinction between career and dead-end labor markets regardless of level of pay. Career labor markets embrace all workers who experience upward economic mobility during their lifetimes. This mobility may come through internal training and promotion, advancement within either a regulated or a competitive occupational market, or by sharing in the gains from product market regulation.

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targets for organized criminal activity. Typically employers and workers would receive "protection" which amounted to cartelization of the product market and control over industrial conflict. Unorganized competition would be eliminated, prices and wages fixed, and often market shares would be enforced through threats and violence. (See John Hutchinson, The Imperfect Union, New York: E.T. Dutton and Co. 1970).

Dead-end labor markets contain workers holding types of employment that provide little training or promotion, and also those for whom discrimination, lack of motivation, or an employment handicap are barriers to advancement. In addition, workers in career labor markets are much more likely to be able to exercise control over market constraints to their advantage whereas workers in dead-end labor markets are less likely to be able to defend themselves against market competition or against the adverse effects of regulation in career labor markets.

When market duality is redefined as a polarization of the labor market into career and dead-end employment opportunities, the explanation of the determinants of upward economic mobility in the primary sector can no longer rest on the distinction between open and structured internal labor markets or the distinction between internal and external mobility patterns. Even where employment is dead-end it is possible through institutional action to accelerate income advancement by manipulating the external labor and product market contexts. The exploitation of internal mobility arrangements or the control over entry into occupational markets are merely part of a larger set of instruments whereby economic mobility is achieved. These include:

1. Transferable skills, ability, and talent.
2. Enterprise-specific skills and mobility within the enterprise.
3. Regulation of external labor market relationships.
4. Regulation, subsidization and protection of product markets.

The low paid, with the exception of some younger workers in training positions, do not have access to any of these sources of career advancement. If manpower policy is to extend career labor markets to the low paid, it must embrace not only programs to enhance transferable skills, but a variety of forms of public and private regulation that are an important element in the upward economic mobility of the better paid.

III

Service Employment and Collective Bargaining: A Study of a Union in the Secondary Labor Market[1]

The 30 percent of the non-agricultural labor force in the United States that belongs to unions is concentrated mainly in the primary labor market. The probability of being in a union falls rapidly at incomes below $5,000 per year, and employment in low skilled services or agriculture, the paradigm of secondary employment, has been least penetrated by unionization. Difficulties in gaining and maintaining organizational strength, in obtaining benefits for members and in servicing agreements, are often cited as reasons contributing to the lack of union organization in the secondary sector. As a result, most studies of collective bargaining and market regulation by unions pertain to employment relationships that fall within the primary sector by virtue of their skill content, pay, or training and advancement opportunities. Yet there are some areas such as apparel, longshoring, and building service that are, or once were, in the secondary sector and where unions have become established.

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[1] The workings of collective bargaining in the low wage jurisdiction of the Service Employees was studied primarily through interviews with over fifty management and union representatives from 1970 to 1973. The materials presented pertain principally to New York city, because of the importance of New York membership and the availability of a long and well-documented bargaining history in that city, but some examples are drawn from the Boston and Washington experience as well. These interviews were supplemented by an extensive review of union journals,

continued on the next page...

In these instances, the impact of unionization upon the labor market experience of the relatively low paid can be studied. This chapter presents a case study of collective bargaining among building service and non-professional health workers as an illustration of the experience with unionization in the secondary labor market. The findings reported represent an attempt to identify some consistent patterns of industrial relations in the low paid market and to develop some general propositions about low paid employment and collective bargaining.

I. A Brief History of the Service Employees International Union

The Service Employees International Union (SEIU) was chartered on April 23, 1921 as the Building Service Employees International Union (BSEIU) to represent elevator operators, janitors, porters, handymen and other workers engaged in lower skilled building maintenance jobs. The first BSEIU locals were located in Chicago, Boston, Seattle and St. Louis and the Union's early strength was in Chicago, New York and San Francisco.

Footnote #1 continued.

convention proceedings, agreements, and research memoranda. Quantitative evidence in support of various propositions is presented when available, but the approach is largely heuristic. In the following chapter a more general quantitative analysis of collective bargaining and upward mobility is provided. Service employment in building service, hospitals and nursing homes was selected as an example of secondary employment because it was possible to obtain, through the cooperation of the Service Employees International Union, historical data tracing the effect of collective bargaining upon wages and employment, as well as more recent information on bargaining developments.

Membership continues to be concentrated in major northern and western cities. In 1967, two-thirds of the Union's membership was in seven cities -- New York, Chicago, Los Angeles, San Francisco, Detroit, Cleveland and Philadelphia -- with three quarters of it in ten large cities[1]. The SEIU has about 500,000 members. Over one quarter of the total membership is located in New York City, where most of the interview work for this project was undertaken; about 40% of the New York City membership is in building service work and about 20% in proprietary hospitals and nursing homes.

From its inception, the membership of the union could clearly be defined as disadvantaged. In 1945, the union membership was described as follows:

> "...our people are unskilled and in that respect, if we quit a job most anybody can come in and take our places, and it is necessary to protect [them] from the other people, who come in when we are on strike; we are in the lower wage brackets, it seems by inheritance over a long period of time, and due to the low wage brackets and being unskilled, we have to a very great extent people who come under our jurisdiction, those who are not educated, and many of them foreign born, unable to speak the English language."[2]

This combination of low skill, low wages, low education and over-representation of minority groups has persisted. In 1960 the median education of janitors was 8.6 years and 36% were non-white; for hospital attendants, median education was 10.8 years and 26% were non-white.[1] In 1965 the Union could still report that:

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[1] Statement by George Fairchild, General Secretary-Treasurer, SEIU, Official Proceedings, 14th General Convention, 1968, pp. 135-136.

[2] Statement by General President William McFetridge, BSEIU Official Proceedings, 9th General Convention 1945, p. 241.

> "We are the poverty workers. Some of our members and potential members work eight hours a day, and must receive welfare to support their families ... Our potential and actual membership are the same people who live in Watts, who live in Bedford-Stuyvesant, who live in Montgomery, New York, Selma, Chicago, and who have participated in the social revolution for justice and equality ...
>
> This SEIU Union is a part of the poor people's movement, because our members and those waiting for us to organize them. They are the poor people [sic]."[2]

Building Service in New York City

The two branches of low paid service employment studied -- building service and health workers -- have substantially different histories in New York City. Building service unions had existed in New York City in the early 1900's and elevator operators' locals were chartered in 1910, 1915 and 1920. The Manhattan Superintendent's Union Local 32 was founded in 1921 and two general building service locals were established in 1933. Local 32B was chartered on April 18, 1934 as a general union of building service workers to represent superintendents, porters, janitors, elevator operators, elevator starters, watchmen and firemen; but not the traditional building trades crafts. Its membership now numbers about 40,000.

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[1] U.S. Census: Occupational Characteristics 1960. Tables 9 and 10.

[2] Report of the Committee on Organization, SEIU Official Proceedings, 1968 op. cit., pp. 214-215.

Local 32B began its organizing drive among the loft buildings in the garment district of midtown Manhattan with some support from the garment unions.[1] Following a short, but important, strike in the garment district on November 1, 1934, a settlement was reached, with the two garment area employer associations -- the Midtown Realty Owners Association and the PennZone Association -- granting the Union the closed shop and providing for the arbitration of wage differences. On November 21 of the same year, Mayor LaGuardia mediated a similar wage arbitration agreement and a "union replacement" provision with the Realty Advisory Board (RAB) representing owners of apartment, office and loft buildings elsewhere in the City. These two bargaining groups, the Midtown Associations and the RAB, continue to dominate bargaining today.

Local 144 started out in 1940 principally representing building service personnel in New York City hotels. Negotiations for non-professional personnel in the health field began in the late 1950's when some hotels converted to nursing homes, and local 144 obtained its first master agreement with the New York City Nursing Home Association in 1957. Local 144 first represented nurses aides, orderlies, building maintenance, and kitchen workers, but subsequently began to organize nursing units as well. In the early 1960's it extended its bargaining activities to proprietary hospitals in New York City, again starting with the non-professional personnel and gradually adding units of nursing and technical workers. The Local now has about 20,000 members.

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[1] See Local 32B, Going Up! The Story of 32B, (N.P., 1955) pp. 49-53 and James J. Bambrick, The Building Service Story (New York: The Labor History Press, N.D.) pp. 11-13.

But for the two decades separating the commencement of building service and health sector bargaining, both unions share many characteristics in common. Their members are generally low skilled, poorly educated, and relatively low paid. Their employment is largely dead-end and labor intensive. Employing units, with the exception of the largest office buildings and hospitals are small and bargaining takes place with employee associations. Both product and labor markets are local and product prices are in a sense "regulated", either by insurance reimbursement formulae or by rent control. In taller buildings (particularly in the period before the automatic elevator) and in the health area, strikes impose severe hardships and the negotiation process has historically been marked by relatively few strikes.[1]

Organizing the Low Paid Work Force

It has been postulated that union membership bears a direct relationship to the level of wages secured by the union.[2] In the low paid sector, however, the concept of the membership function must be modified to reflect the problem of turnover. Just as the relatively high rate of job changing characteristic of the secondary labor market carries implications for efficiency and investments in on-the-job training by enterprises, it implies that unions must either organize a higher proportion of the average work force or keep organizing new hires in order to maintain a simple majority in a bargaining unit. Under such circumstances, union security arrangements are critical to maintaining a dues paying membership base in high turnover employment. Turnover also imposes higher costs of organizing, dues collecting and administration per member .

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[1] See Going Up! op. cit., p. 60. The corollary of the sensitivity to strikes at least in building service, has been frequent political intervention and contract arbitration.

[2] See John T. Dunlop. Wage Determination Under Trade Unions (New York, The MacMillan Co. 1944), pp. 33-35.

Unlike many kinds of work in the secondary sector, the demand for building service and hospital workers is relatively stable. Nevertheless, voluntary turnover remains high. Although little data is available on turnover, the SEIU claims in the public sector that eleven workers had to be organized to increase membership by one during the 1960's and that annual turnover was about one third in the overall membership.[1] Because of this pattern of stable employment combined with voluntary turnover, Local 32B placed great emphasis upon obtaining the closed shop during the 1930's and 1940's.[2] Subsequently, the union has been much less interested in provisions for enhancing employment security (except for preventing arbitrary discharges), than in obtaining forms of compensation that discourage voluntary turnover.

Wage Levels

Suitable data is not available for carefully testing the historical pattern of the effects of unionization upon wage levels in the building service or hospital industry.[1] Rough comparisons, however, suggest that unionized workers in the low wage sector have fared better than average. For example, negotiated changes in building service wage minima in New York have approximated or surpassed percentage increases nationally in average hourly earnings in manufacturing since the war, with the exception of the period 1950-55. (See Table I)

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[1] Statement by George Fairchild, SEIU Official Proceedings, 1968 op. cit., p. 212.

[2] See, for example, transcript of testimony before the National War Labor Board and the NWLB's Report and Recommendations of the Mediation Panel in Realty Advisory Board on Labor Relations and Building Service Employees International Union Local 32-B. Case No. 141 July 29, 1942. A union replacement clause was included in the early RAB agreements and a union shop clause was negotiated as part of the Meyer Arbitration Award. (See Building Service May-June 1948, p. 7.)

In addition, it is worth noting that there has been a shift, at least since 1953, in wage relationships among the lower skilled occupations in New York City. Looking at wage series available after 1953, there appears to be a gradual deterioration of the wage position of the unionized building service workers relative to average hourly earnings for laborers and material handlers, although they have more than kept pace with manufacturing earnings. (See Figure I and Table I) Nursing home wage scales gained substantially, however, (particularly during the period 1963-66) when compared to either laborers or building service workers. In 1959 the lowest building service minimum exceeded the nursing home minimum by about 50 percent, but by 1970 rough parity between the two rates had occurred. While no "pure" comparisons can be made between union and non-union workers of comparable skills, it is apparent that substantial shifts occur over

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[1] Preliminary analysis of national wage data does suggest a small positive influence. Using a simple econometric model applied to a sub-sample of the 1967 nationwide Survey of Economic Opportunity consisting of janitors, porters, charwomen, hospital attendants and elevator operators, it appears that unionization has a small positive impact upon earnings in these occupations. After controlling for variables such as education, location, sex, race and health, unionization raises hourly wage rates at 8¢, or about 4%. Unionized workers consisted of only about 15% of the sample, however, precluding more detailed analysis of the union effects. The estimated coefficient of the union dummy variable, using ordinary least square techniques, had a large standard error and was significant at slightly less than the 10% level.

Table I

Percentage Changes in Hourly Pay Scales: Selected Occupations New York City, 1935-1970

	1935-40	1940-45	1945-50	1950-55	1955-60	1960-65	1965-70
Class "A" Office							
Handyman	52%	38%	52%	27%	21%	16%	31%
Porter	35	40	59	26	20	15	30
Class "C" Office							
Handyman	39	40	56	28	22	16	33
Porter	19	45	62	26	21	18	30
Class "A" Apartment							
Handyman	28	46	56	28	25	18	50
Porter	20	47	61	28	21	19	48
Class "C" Apartment							
Handyman	37	53	66	28	27	19	53
Porter	27	58	68	30	23	20	50
Average Hourly Earnings in Manufacturing							
Production workers U.S.	20	55	41	29	22	15	29
Production workers New York City				20	20	15	30
Laborers, New York City					30	25	34

Table 1 Continued

Absolute Changes in Hourly Pay Scales: Selected Occupations
New York City 1935-1970

	1935-40	1940-45	1945-50	1950-55	1955-60	1960-65	1965-70
Class "A" Office							
Handyman	24¢	27¢	50¢	40¢	39¢	36¢	82¢
Porter	16	25	50	35	34	31	70
Class "C" Office							
Handyman	18	26	50	39	39	36	82
Porter	9	25	50	34	34	31	70
Class "A" Apartment							
Handyman	11	23	41	32	36	32	108
Porter	8	22	42	31	30	32	98
Class "C" Apartment							
Handyman	11	22	42	30	36	32	107
Porter	8	22	41	30	30	32	97
Average Hourly Earnings in Manufacturing							
Production workers U.S.	11	36	20	42	40	35	75
Production workers New York City				32	37	35	79
Laborers, New York City					49	52	89

Figure I (Continued)

Hourly Wage Chronology: Building Service, Nursing Homes, Laborers, New York City 1935-1972

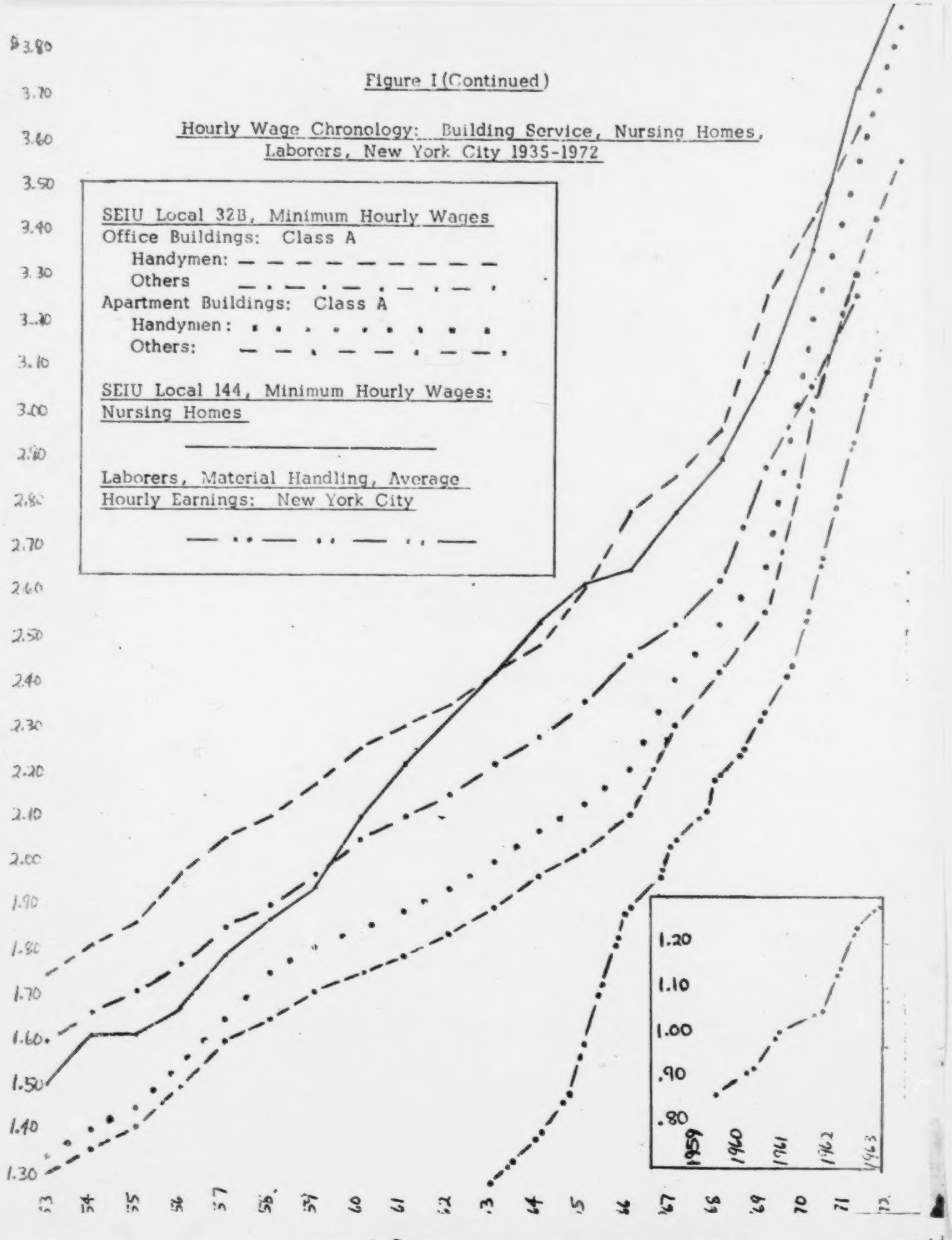
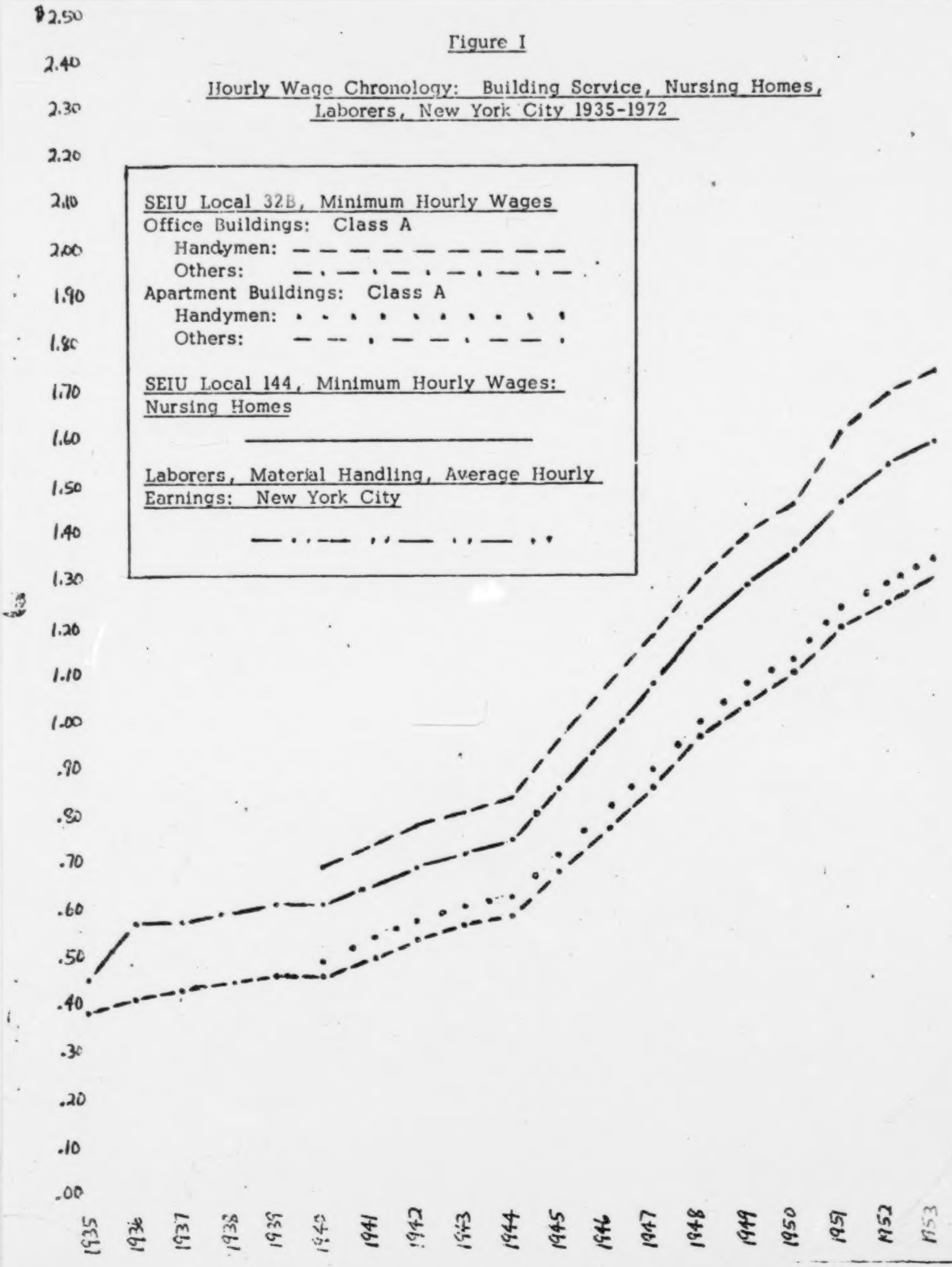


Figure I

Hourly Wage Chronology: Building Service, Nursing Homes, Laborers, New York City 1935-1972



time in the wage structure within the low paid sector.

The Emergence of a Systematic Wage Structure

Unions may negotiate over wage structures as well as wage levels. From union reports and interviews it appears that there was substantial variation in rates paid to building service workers performing similar tasks in various buildings throughout the city. A similar situation prevailed in the health sector. The similar negotiating histories of Locals 32B and 144 suggests that the advent of unionization has a complex effect upon wages -- raising wage levels, bringing greater uniformity to a chaotic wage structure by imposing the principle of equal pay for equal work, and affecting the basic shape of the wage structure.

While reliable data on the wage distribution in building service prior to Local 32B is not available, a wage and hour survey conducted by Local 32B covering sixty buildings in the garment area in 1934 showed a wide range of weekly pay and weekly hours for building service workers in different buildings. (See Table II). On the wage side, pay in about half the buildings surveyed clustered at about $18.00 per week, and 90% of the buildings paid $18 or less per week.[1] Hours varied widely as well. About 17% of the buildings had a work week in excess of 60 hours.

The chaotic state of the market wage structure was noted in an award establishing an occupational wage structure in the building service industry in 1940:

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[1] See Bambrick, op. cit., pp. 15-16.

Table II

Cumulative Distribution of Wages: Building Service Workers, New York 1934						
Weekly wage equal to or less than	$ 15	$16	$17	$18	$19	$ 21
Cumulative distribution of workers in each earnings category	11.7	28.3	38.3	90.1	96.7	100.0

Cumulative Distribution of Hours: Building Service Workers, New York 1934						
Weekly hours equal to or less than	48	54	58	60	64	70
Cumulative distribution of workers in each hours category	16.7	41.7	51.7	80.0	86.7	100.0

> "Prior to the Curran Award of 1935, which established minimum wages for the different types of buildings and classes of apartment houses, there was no uniformity as to the wages paid building employees. The wage schedules followed a general pattern, but it is my impression that at best they were of a somewhat hit-or-miss character, depending upon the policy of the managing agent, the law of supply and demand, the generosity of the owner and the financial conditions of the building. This lack of uniformity was intensified by the depression, the resulting foreclosures and the retrenchments compelled by reduced incomes. Wages were cut as salaries and wages were in every industry. In some buildings the cuts were deferred for a time and were greater in some buildings than in others.[1]

In its early negotiations, Local 32B pursued a mixed strategy of constraining wage and hours structures through wage minima and hours maxima while negotiating uniform dollar increases for all workers above the minimum. The first union agreement in the garment area in 1935, for example, set minimum weekly wages at $20.00, or $2.00 above the 1934 modal rate, and reduced the standard work week to 48 hours, the lowest level prevailing in the industry in 1934. The effect of these negotiations was to truncate the lower tail of the existing wage distribution, to preserve the absolute wage differentials of those above the minimum, and to compress the relative distribution of wages in the industry. This trend towards raising the lower tail of the wage distribution more rapidly than the average was pursued further as a more formal wage structure emerged. During pre-war bargaining the negotiations and arbitration awards tended to favor, in rela-

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1. Arbitration Award "Study B", In the Matter of Arbitration Pursuant to Sec. 22 of the Sloan Agreement between Local 32B and the Realty Advisory Board, October 17, 1940, (Mimeo), p. 20.

tive terms, the highest and lowest paid building service groups: handymen, and workers in both large office buildings and lower valued apartment houses. (See Table I) In 1940 the pattern of giving higher percentage (but lower absolute) increases to the least well paid was adopted in wage arbitrations. For example, the 1940 arbitration with the garment area employers stated:

> "The award being made will aid the lower-paid employees more so than the higher-paid employees. I am certain that no one can dispute the effort to better the wages of these lower-paid employees as against those already receiving a higher wage."[1]

After the war in the 1947 midtown negotiations, Local 32B reconsidered the question of pressing for uniform percentage or absolute wage increases and decided to continue its policy of favoring the lowest paid through absolute increases.[2] With some exceptions this policy has been followed in subsequent years.

A similar pattern was followed in the health sector. For example, the nursing home master agreement signed in 1957 established an industry-wide minimum differentiated by experience and type of work attachment. It also provided for a sliding scale of increases for all workers over the minima that favored the lower paid workers. At the same time, the straight time work week base for pay calculations was reduced to 44 hours with no loss of pay over the 48 hour week.[3]

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1. Building Service, October 1940, p. 6. (Arbitrator Sydney Wolff)

2. "Notes for Discussion Re: Midtown Reopening" (Local 32B Mimeo 1947).

3. See Master Agreement between New York City Nursing Home Association and Nursing Home Division, Local 144 Building Service Employees Union 1957.

While early bargaining was directed at establishing uniform wage minima, there was also an awareness among both the employers and the unions that some of the wage variation among workers and among buildings reflected real economic distinctions. There were differences in the type and quality of work being performed; in the opportunities for supplementary income through tips and extra work; and in the ability to pay among employers. As a result, systematic distinctions in minimum rates by occupation, type of building, and by product market gradually emerged through collective bargaining.

Occupational Wage Structures

After a period of bargaining over wage minima, a formal wage and occupational structure began to be erected on top of the market wide minima in building service. Occupational designations -- janitors, porters, handymen, elevator operators, assistant starters, starters, watchmen, firemen and superintendents -- existed in the building service industry prior to the union, but there was little uniformity in job content, pay, or the relationship between the two.

Prior to 1939, little had been done to rationalize job titles or occupational pay structures other than eliminating pay differences among workers, generally porters, previously below the minimum pay standard. Beginning with the Sloan Award in the 1939 RAB negotiations, however, occupational classifications were formally codified and minimum rates for these occupations were established. Sloan found that:

> "...almost every unit or building is different from the other in its design, its layout and the conditions that prevail. And the product is not the same --the service supplied in a swank East Side apartment house differs materially from that supplied in a Washington Heights type.

> The servicing of a modern office, loft or apartment building does not require the same kind of work from each employee. Some jobs may require men with a certain skill or craft knowledge. Others can be filled by men less skilled.
>
> Some jobs require the holder to assume certain responsibilities of a supervisory nature -- the elevator starter or the head porter in the larger office and loft buildings, for example. The degree of skill required and of responsibility assumed varies with the type and size of the building and the class of tenants it seeks to serve. The qualifications of a so-called handyman in one building will be more or less, in varying degrees, than will be required of a man in another building. A handyman in an office building, if transferred to an apartment building, would have similar work to do in that it is of a mechanical nature, but at the same time it might be very different work. Easily it might be that a handyman thoroughly satisfactory in an apartment building would not be so in an office building.[1]

In spite of these difficulties the Sloan award created the four-fold occupational system -- (a) elevator starters, (b) assistant starters, (c) handymen, and (d) other employees (porters, cleaners, firemen etc.) shown in Table III. This same structure, for office and loft buildings was introduced into the Midtown agreement in 1951. The occupational wage structure has remained quite stable over time and continues to be used throughout Manhattan.[2]

In hospitals and nursing homes a similar pattern emerged of first negotiating overall wage increases, then codifying an occupational wage structure with minimum rates. The first multi-employer nursing home agreement negotiated in 1957 committed the parties to establishing job classifications, and wage minima for each classification no later than 1960. In 1960 the

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1. Sloan "Study B", op. cit., pp. 16-17.

2. Because handymen always received equal or larger cents per hour increases than other workers prior to 1950, there was a narrowing of the handyman's rate relative to other workers. After 1950, however, the handyman's rate generally improved relative to other building service workers in similar types of buildings.

basic structure was developed and by 1963 the nursing home occupational wage structure was in place. In hospitals, the 1965 master agreement with the Association of Private Hospitals established the basic occupational wage structure.

Health sector occupational wage structures also provided for some further pay differentiation under specified circumstances. A special senior aide and orderly classification was established for workers with six or more years of experience in hospitals, a special handyman's rate took effect in hospitals in December of 1965, and a utilityman category now exists in some nursing homes. Premia for working with difficult groups -- alcholics, addicts, and patients with infectious diseases -- were added in 1967.

Wage Differentials by Product Market Sector

Beginning with the Curran Award of 1935, formal distinctions were recognized between wages to be paid for building service work in apartment houses, lofts, and office buildings. The highest rates, as can be seen in Table III, were paid for office work and lowest for apartment house work. These distinctions reflected both differences in job content -- apartment houses generally required lighter cleaning and maintenance work and provided greater opportunities for extra income than office buildings and lofts -- and a more prosperous rental market for office buildings than apartment houses. As can be seen from Table I, the apartment and commercial agreements have historically followed two distinct patterns, and separate negotiations have governed wages in these two groups since 1945. In general, the absolute increases obtained for apartments were less than for commercial buildings, but the relative differential narrowed steadily after 1940. In 1967 and again in 1970, however, apartment house rates began to advance rapidly on commercial building rates as a result of limited relaxation

Table III

Wage and Occupational Structures:
Building Service, New York City 1940

	Office per week	Loft per week	Apartment per month	
Starters				
"A"	$31.00	$29.75		
"B"	29.75	27.75		
"C"	28.00	26.00		
Assistant Starters				
"A"	$30.00	$28.00		
"B"	28.75	26.75		
"C"	27.00	26.00		
Handymen				
"A"	$33.00	$31.00	$114.00	($26.30/week)
"B"	31.00	28.00	104.00	($24.00/week)
"C"	30.00	27.00	94.00	($21.69/week)
Other Employees				
"A"	$29.00	$27.75	$106.00	($24.46/week)
"B"	27.75	25.75	96.00	($22.15/week)
"C"	26.00	25.00	86.00	($19.85/week)

in rent control regulations governing apartment houses. By 1971 the apartment rates exceeded commercial rates in comparable types of buildings, thus obliterating the distinct wage contours for apartment and commercial building service work.

Differential ability to pay is also recognized in the building service wage structure by the separate classification of buildings on the basis of size or assessed value. The Curran award of 1935 provided for a discriminating price structure for categories of apartment buildings. Apartments assessed at $4,000 or more per room were classed as "A" buildings, those assessed at $2,000 - $4,000 per room as "B" buildings, and those assessed at less than $2,000 per room were designated as "C" buildings. Pay scales were then linked to building classifications, with "A" buildings having the highest minima. In 1936 the classification principle was extended to offices and lofts based upon gross area. As with the occupational minima, the negotiations have gradually narrowed the relative differential between class "C" and class "A" buildings.[1]

Apart from pay premiums for special types of work such as brass polishing or shift work, these changes represented the major types of wage structures created by the union.

Turnover and Work Force Quality

Although little data is available on trends in turnover, employers and union officials both agree that work force stability, and the quality of new hires, increased in the early years after union organization. For example, a management representative in the hospital industry described the experience with turnover as follows:

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[1] In the early 1970's this trend was extended in apartment buildings by an agreement to classify all new apartments as Class "A" buildings.

> ...extremely high rates of turnover and irregularity of attendance have plagued the industry. Most disciplinary grievances are over absenteeism and turnover. Although the work design and employment are very stable in the industry, turnover was reducing the quality of patient care. Longevity-determined pay scales and longevity-determined fringe benefits negotiated with the union have created incentives for continuity of employment and have substantially reduced turnover.

A union official in the nursing home sector described employment before the coming of the union as having:

> ...low pay, long hours, and poor working conditions. The union has reduced hours, regulated shifts, raised pay, and informally improved working conditions. Specifically, it has reduced the "speed-up" of porters' work and has protected employees from assignment outside their classification -- porters do porter work and do not move patients or beds; kitchen help does not do porter work; and so forth. This has led to the position of utilityman being created in some departments at higher rates of pay. The improved working conditions have helped to reduce quitting.

In building service, Local 32B claimed by the end of 1937, that turnover had fallen by half as a result of control over firings and the eliminations of sweatshop conditions.[1]

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[1] Building Service, December 1937, p. 4.

Part of the decline in turnover can presumably be traced to the introduction and spread of longevity-related compensation.[1] Prior to the advent of unions in building service union officials report that vacations were irregular, health, welfare and pensions were non-existent, and "moonlighting" was prevalent. In 1937, the Laughlin Award provided a week's vacation to all employees with a year of service. This was modified in 1938 to three days for full-time workers employed six months consecutively and 1 day for each additional two months up to a limit of one week, and in later agreements the length of vacations was increased for long service workers. The device of tying sick leave, as well as vacations and pensions, to longevity has been favored by employers in the health sector as a means of discouraging turnover. The use of compensation arrangements to reward continuity of employment and to penalize instability is illustrated most clearly in the hospital and nursing home agreements. In nursing homes, the 1967 Master Agreement provided pay bonuses for all workers with six years or more of substantially continuous service. An amendment to the 1969 hospital agreement denied accumulated sick leave to workers discharged for cause or those quitting without two weeks notice.

These changes in employment conditions and compensation also permitted other adjustments that in turn contributed to stability. In nursing homes and hospitals, for example, the quality of applicants gradually improved, allowing employers to be more selective and to develop more restrictive hiring criteria. Probationary periods also became a more important tool in work force management.

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[1] In other industries it can be demonstrated that such plans have reduced work force instability by increasing the incentives for continuity of employment. See, for example, Llad Phillips, "An Analysis of the Dynamics of Turnover in United States Industry", (unpublished dissertation, Harvard University, 1969) and Arthur M. Ross, "Do We Have a New Industrial Feudalism?" American Economic Review, December 1958, pp. 903-920.

As the work force stabilized and the quality of new hires increased, distinctions between "permanent" employees with superior rights, "casual" employees with inferior job rights, and new job applicants with no prior rights, began to emerge. Casual workers were formally classified as "per diem", "extra", or "contingent" employees, receiving wage benefits, but few rights to pensions or other fringes. The per diem worker, however, did have preferential access to permanent employment. In building services, for example, the 1940 Meyer Award in the garment area provided that:

> Men employed as extras or contingents with substantial regularity for periods of six (6) months or more, shall receive preference in steady employment, other considerations being equal.[1]

In the health sector, per diem workers received higher pay, but did not receive rights to welfare and pension benefits. Such work, in effect, provides a bridge between the unstable or casual work and permanent work in the industry.

Internal Mobility

As early as 1939 the building service agreements provided for internal promotion and the consideration of seniority in promotions and layoffs. Similar seniority arrangements are also found in the early nursing home and hospital agreements. For example, the promotion clause 6(c) in the 1967 nursing home agreement calls for:

> Promotions within the bargaining unit shall be upon the basis of skill, ability, and qualifications.

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[1] See Meyer Award for Midtown Associations cited in Building Service March 1940, p. 9.

> When these are reasonably equal, seniority shall prevail."

But where labor demand is relatively stable, and where promotion opportunities are severely constrained by the job structure of the enterprise, seniority and the commitment to promote from within can make little contribution to employment security and economic mobility. As occupational wage structures became formalized, however, a limited number of promotion opportunities began to emerge. The porter - handyman - building superintendent ladder now exists in building service work; within hospitals and nursing homes it is now possible to move along a systematic promotion line from porter to utilityman and from aide to senior aide. More recently, in the 1969 commercial negotiations, local 32B obtained a new porter-foreman classification specifically to provide upgrading opportunities for workers in larger cleaning crews. But it must be concluded that collective bargaining in these two sectors has made only minor additions to the skill hierarchy and to opportunities for internal mobility.

Bargaining Units and Internal Upgrading

Bargaining unit determinations by federal and state labor relations agencies can also carry implications for upgrading. Separate units and separate union jurisdictions may limit internal mobility and can impede upgrading, particularly when units are stratified horizontally by occupation. Such stratification can also disturb the efficiency of training and manpower utilization.

In building service, these considerations do not seem to have affected economic mobility, probably because comprehensive blue-collar units have usually been established.[1] In the health sector, on the other hand, there was a keen feeling among employers that flexibility in manpower utilization and assignment are critical to the delivery of services and that multiple bargaining units introduced serious inefficiencies.[2]

The SEIU has adopted a mixed policy on the bargaining unit question. In retailing and hotels, it has generally opposed broad units, preferring instead smaller units based on extent of organization .[3] But when the NLRB asserted jurisdiction over larger nursing homes and hospitals in 1968, the Union endorsed the certification of comprehensive units including both non-professionals and para-professionals.[4] The experience with these comprehensive units, however, suggests that it has had little effect on internal upgrading and mobility. The departmental and craft structure of nursing homes and hospitals established before the union has been continued, and there has been little union interest in pressing for interdepartmental transfer arrangements. If, as has sometimes been postulated, industrial type units encourage the expansion of upgrading and transfer opportunities, this effect takes longer than the fifteen year period studied in the health sector.

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[1] See, for example, Shannon & Luchs, Agents Capital Park One, 162 NLRB No. 30 (1967). The NLRB specifically rejected a janitorial unit in a department store where it held that sales and non-sales work was unskilled and the employees shared common wages and working conditions. See White Front South San Francisco, Inc. 159 NLRB, No. 63 (1966). See also J.L. Hudson. 155 NLRB 1345(1966)

[2] See R.L. Miller, "The Hospital-Union Relationship, Part 2; Hospitals (Journal of American Hospital Associations), May 16, 1971, pp. 52-53.

[3] See SEIU Official Proceedings, 13th General Convention 1964, pp. 301-303 and SEIU, 14th General Convention, op, cit., 1968. pp. 314-315.

[4] See Butte Medical Properties, d/b/a Medical Center Hospital 168 NLRB 52 (1968), University Nursing Home 168 NLRB No. 53 (1968); and New Fern Restorium Co. 175 NLRB, No. 142 (1965). Comprehensive Units were based upon common supervision, duty stations and working conditions.

Service Employment and Work Careers

While there is only limited opportunity for promotion within the low wage enterprises studied, even after the advent of collective bargaining, the possibility remains that advancement avenues are available through external market mobility. The data are not available to measure directly the relationship among service employment, unionization, and external mobility, but some insights into possible career paths can be gained by examining the employment histories of workers in these service occupations.

A sub-sample of work histories (as illustrated in Table IV) drawn from the National Longitudinal Labor Market Survey consisting of all older males who had ever held janitorial, porter, or hospital attendant positions was examined. Out of some 300 usable work histories, several identifiable patterns of lifetime employment structure emerge. The dominant pattern, affecting about 80 percent of the sample, was of a lifetime of work in low paid occupations. Typically, employment for this group consisted of cleaning work, laborers' jobs, retail sales, and low skilled jobs in furniture and lumber making, food processing, laundries, and the like. About one-third of this group entered the labor market as agricultural or forestry workers, whereas the rest started work in low paying, non-agricultural occupations. Janitorial or hospital work tended to come later in the working lives of these workers. On the whole, workers following this pattern were poorly educated.

A second group, comprising about 18% of the sample, could be described as upwardly mobile. They started work in the secondary sector and held janitorial or hospital jobs as an intermediate career step. For those in this group who were well-educated (high school and above), the final step on the occupational ladder entailed some form of clerical employment in manufacturing,

Table IV

Illustrative Career Paths of Workers Ever-Employed in Selected Service Categories

Careers Confined to Secondary Employment

Farm laborer → food salesman → elevator operator → building service worker

Farm laborer → laborer → janitor

Farm laborer → elevator operator → semi-skilled meat packer

Farm laborer → porter → garage laborer

Hospital porter → building cleaner → building service worker

Laundry-worker → hotel service worker → repairman-hotel → hospital attendant

Bootblack ————————————→ porter

Gardener → Janitor → laborer → guard → private household worker

Careers with Upward Mobility

Farm laborer → machine mechanic → janitor → machine mechanic

Farmer → telegraph operator → decorator → janitor → laborer → painter

Farm laborer → janitor → oiler and greaser → semi-skilled operative

Farm laborer → janitor → clerical worker

Hospital attendant → mechanic → technical worker → inspector → clerical worker

Hospital attendant → clerical worker → personnel and labor relations worker

Porter → laborer → shipping clerk → clerical worker

Laborer → Foreman-laundry → Janitor → Excavator, construction → welder

Table IV (Continued)

Careers with Upward and Downward Mobility

Truck driver → bus driver → retail manager or proprietor → janitor → mail carrier

Clerical worker → proprietor → janitor

Salesman → hospital attendant

Semi-skilled operative → welder → janitor

Farm laborer → painter → janitor

Mechanic & repairman → plumber and pipefitter → janitor

Sheet metal worker → mechanic and repairman → janitor hospitals or government. The less well-educated, about two-thirds of the upwardly mobile group, mostly found employment in semiskilled jobs in relatively high wage manufacturing, while smaller numbers obtained craft-like jobs -- welders, painters, mechanics and the like.

The third, and smallest, group of workers, comprising less than 5 percent of the sample, had uneven careers, holding jobs characteristic of the primary sector and then moving into janitorial positions. For a small number of the well-educated, janitorial employment followed saleswork or small proprietorships. But for the majority, the employment pattern was much like that of the upwardly mobile group -- starting as farm or factory laborers (or in other unskilled work), moving to craft-like employment such as painting, repair work and welding, and then returning to janitorial work.[1]

Other Influences of Unions and Collective Bargaining

In addition to the direct effects of unionization upon compensation, employment stability, and upgrading, it has had some influence upon both work management and the product market constraints affecting the outcome of negotiations.

Changes in Technology and Management Techniques

With the exception of the automatic elevator and increased use of cleaning and waxing machines, there has been little mechanization of the cleaning process. Most changes have occurred through building design and industrial engineering. Increasingly buildings are being designed to facilitate cleaning through tip-out windows, larger open areas, and the like, leaving the underlying cleaning and maintenance tasks unchanged. Improvements in work organization and scheduling, particularly among cleaning contractors, has also raised productivity. Many of these improvements, however, were independent of unionization.

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[1] While about two-thirds of the sample was black, race did not seem to affect the probability of upward mobility. The upwardly mobile group, however was somewhat better educated.

The main changes in management techniques that can be traced to the advent of collective bargaining are in the growing professionalization of industrial relations and personnel management. Increasingly, personnel specialists can be found in large office buildings, contract cleaning companies, hospitals, and nursing homes. Among the smaller employers, these negotiating and administrative skills are being provided more and more by industry associations. Partly this has been due to the increased complexity of collective bargaining, but in many cases it derives from the union's articulation of the need for fair and equitable industrial relations practices. In the 1945 Frankenthaler Arbitration Hearings on the RAB and Midtown negotiations, for example, there is a long discussion by the union about the importance of the grievance procedures in eliminating inequities and in the regularizing of work rules.[1] More recently, this same interest has been highlighted by complaints brought through contract grievance procedures. Several of the building superintendents surveyed mentioned the frequency with which complaints over favoritism in overtime assignment arose following union organization. These were finally resolved by replacing discretionary assignments with alphabetical or seniority rotation systems for assigning overtime. More generally, there is a feeling both among employers and union officials that unionization has made workers more conscious of their rights, and that managerial prerogatives have been restricted.

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[1] See Transcript of Proceedings of the Frankenthaler Arbitration Hearing, pp. 24-27.

Market Regulation

While collective bargaining in service employment seems to have concentrated largely on the bread and butter issues of wages and fringe benefits, and their derivative effects upon stability of employment, the unions have also been active in the area of economic regulation. To date the emphasis upon regulatory activity has been strongest in the building service area. In the first decade of 32B's bargaining activities its negotiations were always resolved by a neutral party, often as the result of direct intervention by the Mayor of New York.[1] Consequently, the framework of the present employment and compensation structure was shaped more through third-party arbitration than through direct bargaining. This early bargaining history fostered an awareness of political avenues for achieving economic benefits.

But the involvement of the SEIU in the politics of regulation extends beyond the direct intervention of government in collective negotiations. It has sought to supplement bargaining through legislative regulations affecting minimum wages, manning requirements, wage costs in the unorganized sector, rent control, competition".[1] Non-union contract cleaning competes with both unionized contract cleaning and unionized resident cleaning operations making the survival and economic success of the Union dependent upon minimizing non-union cost advantages. Nor is such regulatory activity limited to legislation. Examples can also be found within collective agreements. The New York City Nursing Home Association Agreement of 1963, for example, provides for a "most favored nation" clause preventing the union from negotiating more favorable agreements with independent nursing homes and imposes a $2.00 per week wage premium upon independents.[2]

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[1] In the 1942 War Labor Board Hearings over the RAB contract, the mediation panel traced the frequent use of arbitration and government intervention to the:

> "...importance of vertical transportation to the commercial and domestic life of Manhattan. Wide spread strikes among building service employees have always resulted in the intervention of local or State authorities, and in the bringing to bear upon both parties of pressure to effect a settlement."

(National War Labor Board, Directive Order, Realty Advisory Board on Labor Relations, op. cit., p. 7.)

The tendency for unions to regulate product and labor markets so as to reduce the competitive constraints facing the wage negotiations is part of a larger tendency of workers and employers to obtain relief from the pressures of competition. The desire to monopolize, form cartels, and otherwise restrain trade through the regulation of product markets has long been a goal of concentrated industries. Where competition is relatively atomistic, it is not surprising that a centralized body such as the trade union should seek to organize and regulate both product and labor market competition, particularly as it is free of many of the restrictions of antitrust legislation.[3] Unions frequently adopt positions parallel to those of the employers with whom they negotiate when lobbying for increased

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1. See McCabe, David A., The Standard Rate in American Trade Unions, (Baltimore: The Johns Hopkins Press 1912).

2. Agreement Between New York City Nursing Home Association and Local 144, Nursing Division, Service Employees International Union 1963.

3. See, for example, Archibald Cox, "Labor and the Anti-Trust Laws", 104 U. Pa. L. Rev. 252(1955).

tariff protection, maritime subsidies, higher rent ceilings, and increases in regulated product rates. These are product market analogs of union efforts to control labor market entry through apprenticeship and licensing laws.

More generally, reducing competition by regulating product and labor markets seems to be a characteristic associated with economic success in industries where unions are most solidly entrenched. Where product and labor market competition are most severe, the prospects of achieving relative economic gains through collective bargaining are substantially reduced. Under these circumstances, it is competition that holds back economic advancement and it is regulation that provides one remedy to remove downward pressure on wages. Yet regulation is hardest to establish where employing units are small and the work force unskilled or casual.

When labor and product market conditions are extremely competitive, market institutions face great difficulty in exerting independent influence over wages and working conditions. It is therefore not surprising that in low skilled, highly competitive industries such as building service, unions should have experienced organizing difficulties and that, in many cases, union organization should have been preceded by institutions employing extra-legal means to organize and regulate the market.

In both Chicago and New York, building service, along with other types of highly competitive work, was at one time infiltrated by racketeers. In 1934, when competition in the industry was further aggravated by the depression, the Building Service Employees International Union and some New York realty employers fell under the influence of racketeers already involved with garage employees, retail clerks, and laundry employees. The established mode of operation was to extort money from employers for strike protection, to control union treasuries and strikes, and to provide labor peace for cooperative employers. In exchange, some small share of the returns to extortion were passed on to the unionized work force. Where rival union organization or wild cat strikes occurred, these were dealt with through racket-controlled "strike-breaking" agencies.[1] As competition stabilized, however, it became possible for legitimate unions to replace criminal organizations.

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[1] See John Hutchinson, The Imperfect Union, (New York, E.P. Dutton & Co., 1970), pp. 124-125. More dramatic evidence of the general proposition that extreme competition can only be modified by extreme regulatory activities is found in industries such as the needle trades, culinary work, and longshoring. The economic features of these industries -- small employing units, labor costs forming a high proportion of total costs, an unskilled and unstable work force, and intense competitive pressures -- are more extreme versions of the kinds of secondary employment found in building service and hospitals. In fur dressing, for example, two large employer associations were formed in 1932 whose purpose was:

> " ... to drive out of existence all non-member dressing firms; to persuade all dealers to deal exclusively with members of their combinations... to eliminate competition; to fix uniform prices by agreement; to set up a quota system whereby each of the different members received a certain percentage of the entire business handled by the members of the combination..." (Ibid. p. 81)

This cartel was enforced by organized crime and the support of Needle Trades Workers International Union was sought to reinforce the cartel by using labor trouble to force nonmember firms into compliance with cartel rules.

Summary

In many respects, building service work and nonprofessional employment in the health sector epitomize the secondary labor market. Work is relatively unskilled, little on-the-job training or promotion opportunity is available, employing units are often small, the labor force is dominated by minorities and the poorly educated, and turnover among the work force has been high at times. But there are also differences that distinguish such employment from the most extreme examples of secondary work. The demand for labor has been relatively stable, being subject more to secular forces than to the seasons or the business cycle. Relatively large employment units can be found in the hospital and nursing home sector, and changes in the industrial organization of building service are gradually encouraging larger contract cleaning firms. Product market competition has also been less severe in the health sector than in many parts of the secondary labor market. And in some cities, building service and health employment has been vulnerable to the strike, thereby strengthening the potential for trade union activity. These considerations suggest that it is somewhat easier to establish and maintain a collective bargaining relationship in these types of service employment than elsewhere in the secondary labor market. The competitiveness of the labor market and the low skill content of work characteristic of secondary employment, remain as constraints upon reshaping this type of secondary employment.

Two general conclusions can be drawn from the bargaining experience studied: (1) Both building and health sector negotiations followed similar patterns, despite major differences in the economic and political environments in which the bargaining occurred, and (2) bread and butter issues of wages and fringe benefits were much more central to negotiations than were attempts to restructure employment or to provide greater training and economic mobility. Nevertheless, bargaining over economic issues induced a complex set of changes in the employment relationship resulting in a gradual trend towards some, but by no means all, of the features of primary employment in these sectors.

These trends can be briefly summarized. Under the combined pressure of rising wages, reductions in straight-time hours, and the rationalizing of the relationship between pay and work, a chaotic system of compensation was replaced by a systematic occupational wage structure purged of sub-standard pay and working conditions. The wage structures emerging from this process appear, with some exceptions, to be remarkably stable over time.

Providing for systematic pay structures, however, was part of a larger rationalization of managerial practices in the organized sector in which industrial relations rules were clarified and subject to new tests of efficiency and equity. Longevity-related compensation arrangements were developed that served to stabilize employment. Restrictions were placed on arbitrary discharge, layoff, and assignment. Limited promotion opportunities were created out of the systematic classification of jobs. Increases in compensation, the stability of employment, and better management of labor resources, improved the quality of new hires, and what was once a homogeneous and unstable work force gradually became divided into permanent and casual workers, with sharply codified distinctions in their employment rights and benefits.

Finally, emphasis upon the direct regulation of the employment relationship through bargaining has gradually been supplemented by the regulation of non-union competition through wage legislation and other political activities designed to relieve downward pressures upon negotiations.

IV.

Labor Market Duality and Collective Bargaining in the U.S.: A Quantitative Examination

The correlates of earnings--education, race, sex, family background, IQ, place of residence, age, health, and so forth--are by now well established.[1] In general terms, race or sex discrimination counts against earnings, residence in a city and in the west raise earnings, poor health reduces earnings, education and work experience raise earnings, and so forth.

When the prices that the labor market assigns to various worker traits are analyzed, however, it becomes apparent that certain effects -- those associated with race, sex, and to some degree education -- permeate the distribution of earnings in more pervasive ways than others. This has been most carefully documented in the case of sex and race, where it has been shown that both education and work experience pay off less for women and blacks than for white men.[2]

The most common way to examine the interaction of race, sex, and education with work experience is to estimate lifetime earnings profiles for different labor force groups. Ideally, such profiles would be developed from longitudinal data tracing the earnings of the same cohort of workers over time. Such data is only gradually becoming available, however, so that longitudinal inferences must often be drawn from cross-section analyses. This approach has certain limitations -- experienced workers have entered the labor market and acquired on-the-job training under markedly different supply and demand conditions from those affecting new entrants; race and sex discrimination may differentially affect the earnings prospects of younger and older workers; educational inputs vary by generation; and the mix between fringe benefits and wages may vary by age groups, thereby distorting estimates of compensation based solely on earnings. Despite these cohort effects, inferences drawn from the "steepness" of age-earnings curves, a proxy measure of life-time on-the-job training and economic mobility, appear reasonable from the limited longitudinal studies available.[1]

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[1] Samuel Bowles and Herbert Gintis, "I.Q. in the U.S. Class structure", (Harvard University mimeo July 1972), Zvi Griliches and William M. Mason, "Education, Income and Ability", Journal of Political Economy, May/June 1972, George E. Delehanty and Robert Evans, Jr., "Low-Wage Employment: An Inventory and Assessment", (U.S. Department of Labor, Manpower Administration, Mimeo 1965), Howard M. Wachtel and Charles Betsey, "Employment at Low Wages", Review of Economics and Statistics, May 1972, and Barbara R. Bergmann, "The Effect on White Income of Discrimination in Employment", Journal of Political Economy, March/April, 1971, pp. 294-313.

[2] See, for example, J. Mincer, "On-the-Job Training: Costs, Returns and Some Implications", Journal of Political Economy, October 1962 pp. 50-79. R.E. Hall, "Why is the Rate of Unemployment So High at Full Employment?", Brookings Papers in Economic Activity, No. 3, 1970, pp. 349-402.

Estimating "pure" age-earnings profiles for various labor force groups from data contained in the 1967 Survey of Economic Opportunity reveals two distinct clusters of profiles as shown in Figures 1A and 1B.[2] One group contains white males who, re-

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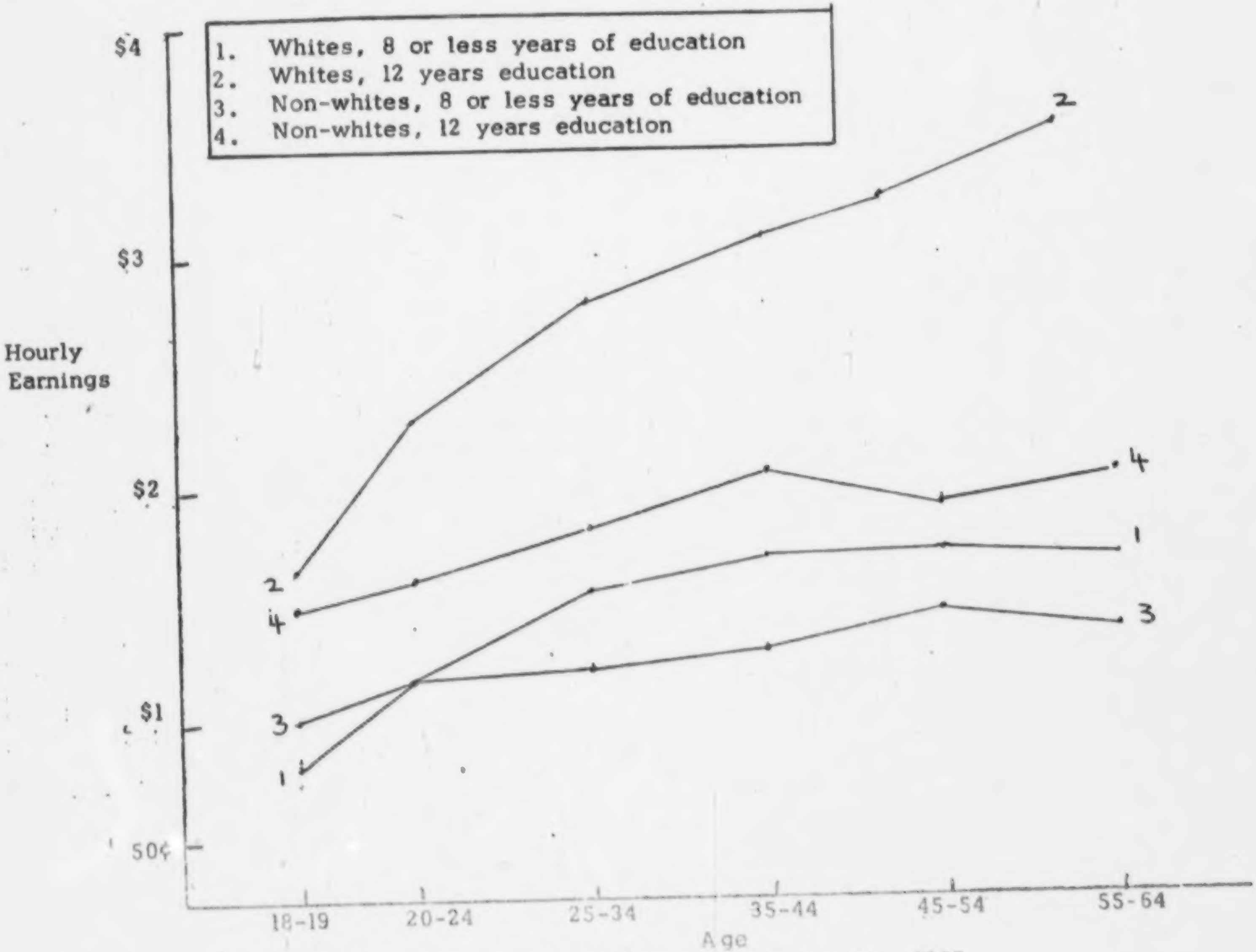
[1] How serious these defects are is not yet known, but preliminary analysis of Swedish data suggests that the falling off of earnings among older workers generally observed in cross-section studies appears in longitudinal studies as only a decline in the rate of increase in earnings. (See Ingalill Ericksson, Ålder Och Inkomst, Study No. 9, Swedish Low Income Commission.) This is also supported by retrospective information gathered by the recent "Chicago" labor market study. See Albert Rees and George P. Shultz, Workers and Wages in an Urban Market. (Chicago: University of Chicago Press: 1970) pp. 153-54. Recent unpublished work by Howard Birnbaum at Harvard using the National Longitudinal Labor Market Study data also supports this view.

[2] These profiles were calculated by controlling for a wide range of factors thought to influence earnings. See the Statistical Appendix for a detailed description of the data.

Figure 1A

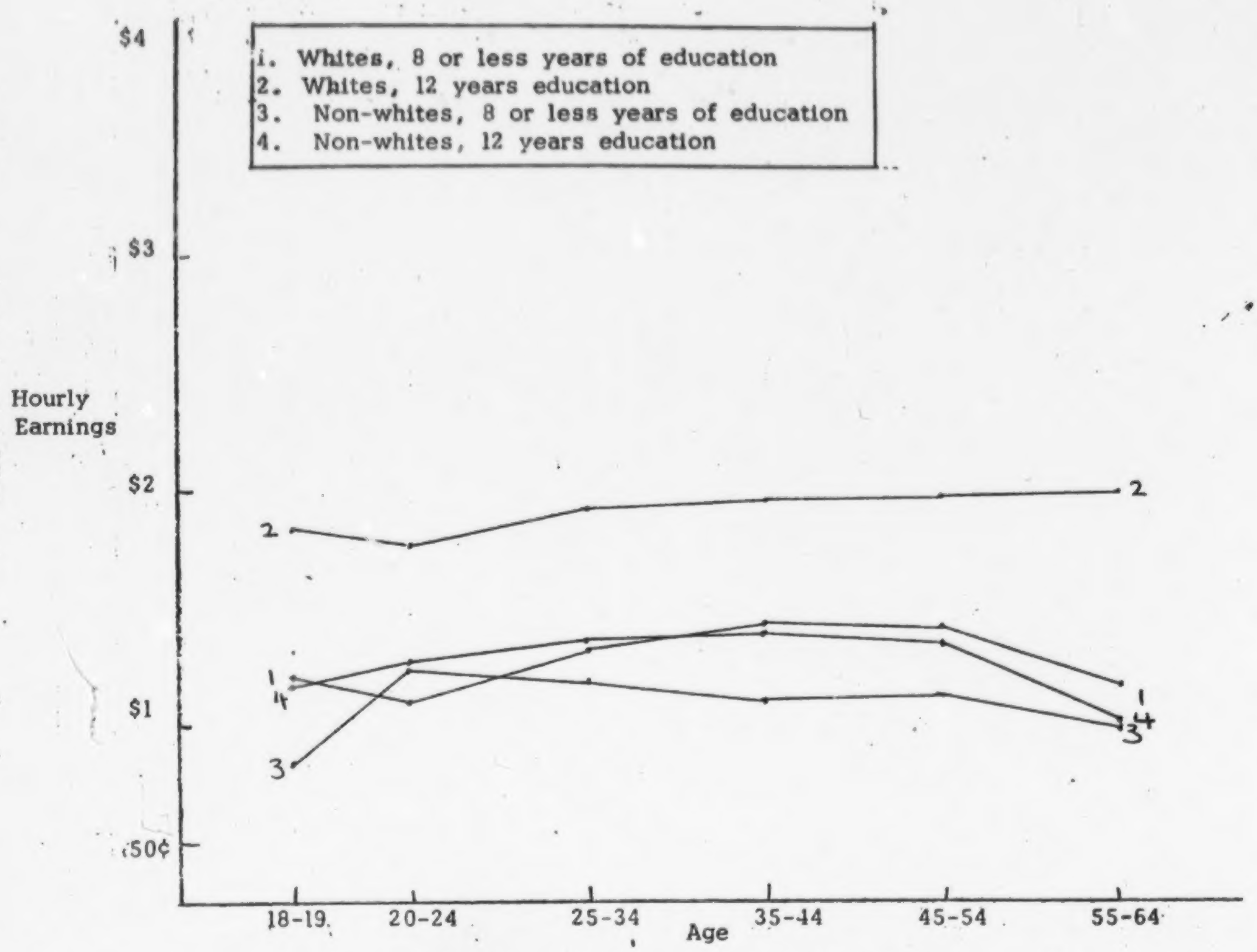
Earnings by Age, Race, Sex and Education: Males, U.S. (1957)



Source: Derived from the Survey of Economic Opportunity, 1967

Figure 1B

Earnings by Age, Race, Sex and Education: Females, U.S. (1967)



Source: Derived from the Survey of Economic Opportunity, 1967 gardless of educational levels, exhibit "peaked" age-earnings profiles. The other group contains female and non-white workers, who have much "flatter" earnings profiles. In terms of market duality, confinement to dead-end employment in low wage jobs seems to be largely a phenomenon of race and sex combined with poor education.[1]

I. Unions and the Work Relationship

While the broadest outlines of market duality reflect the interaction of race, sex, and education upon pay and advancement, unions and collective bargaining may, as has been argued earlier, modify market structure. The impact of collective bargaining upon the labor market is usually measured through the effect of unions upon relative wages. Numerous studies have demonstrated a positive influence, although there is substantial variation in the estimated impact.[2] There are, of course, numerous methodological difficulties with such estimates that serve to cloud the measured impact of unions upon wages: the causality between unionization and wage rates may go in both directions; adjustments in labor quality or in non-pecuniary benefits may occur in response to unionization; and there may be "spillovers" when employers seek to block unionization by paying the union rate or when union rates are "extended" through legislation.[1]

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[1] See Peter B. Doeringer and Michael J. Piore, Internal Labor Markets and Manpower Analysis. (Lexington, Mass: D.C. Heath, 1971) Chapter 8.

[2] See H. Gregg Lewis, "Competitive and Monopoly Unionism" in Philip D. Bradley ed., The Public Stake in Union Power (Charlottesville: University of Virginia Press, 1959), pp. 181-208; Melvin W. Reder, "Unions and Wages: The Problems of Measurement," Journal of Political Economy LXXII (April 1965) 188-196; Sherwin Rosen, "Unionism and the Occupational Wage Structure in the United States," Internation Economic Review, XI (June 1970) pp. 269-286; Leonard Weiss, "Concentration and Labor Earnings", American Economic Review, LVI (March, 1966), 96-117.

As the discussion of the last chapter suggests, however, there are a wide range of non-wage elements in the work relationship that contribute to labor market duality and that can be altered by collective bargaining. These include:

1. the security, stability and continuity of employment of the work group.
2. hiring, training and advancement patterns and the conditions of labor market entry.
3. the internal structure of wages.
4. the temporal pattern of earnings.
5. the quality of management
6. the degree of equity at the work place.
7. the rate of technological change and the efficiency of production.
8. the specificity of training.
9. the production costs and competitive position in the product market of union and non-union employers.

Direct concern with compensation levels may, in fact, be subordinate to this larger list of union activities designed to create an environment in which collective bargaining can operate more effectively, and in which more orderly and stable work relationships are achieved.

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[1] Orley Ashenfelter and George E. Johnson, "Unionism, Relative Wages, and Labor Quality in U.S. Manufacturing Industries" International Economic Review., Vol. 13, No. 3, October 1972.

Unions not only raise wages, but they encourage more rigid and complex wage and occupational structures. They negotiate pay premia for overtime, holiday work, late shifts, call-in and so forth.[1] And they often favor seniority as a rule for allocating economic benefits among their members. Emphasis upon fringe benefits (such as pensions, SUB, vacations and so forth) that are related to seniority have also increased the commitment to the work place.[2]

These practices have, in turn, encouraged specificity of training and the stabilization of the work group.[3] Increased training investments and fringe benefits have raised fixed employment costs, encouraged the stability of employment, and shifted some of the burden of adjustment to economic instability onto non-labor factors such as inventory control and better production planning.[4]

The effects of unions upon the quality of management and the rate of technological change is less certain. To the extent that unions have contributed to high fixed employment costs by altering the composition of training and of compensation, better production planning and control have been encouraged. But unions have also demanded more of employers in terms of uniform and rational utilization of workers. Where unions have developed grievance procedures to

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1. S.H. Slichter et. al., The Impact of Collective Bargaining on Management. (Washington: Brookings Institute, 1969), Ch. 13-16.

2. Slichter, op. cit., Chs. 5-7, 13-16, and Llad Phillips, "An Analysis of the Dynamics of Labor Turnover in United States Industry," unpublished dissertation (Harvard University, 1964).

3. See Peter B. Doeringer and Michael J. Piore, Internal Labor Markets and Manpower Analysis, (Lexington, Mass.: D.C. Heath 1971)

4. See Charles Holt, et. al., Planning Production Inventories and Work Force, (Englewood Cliffs, New Jersey, Prentice-Hall, 1960) and Walter Y. Oi "Labor as a Quasi-Fixed Factor", Journal of Political Economy (Dec. 1962) pp. 534-555.

police inequitable application of work rules, and where the institutional presence of a union encourages the codification of work practices, poor managerial decisions become more costly to rectify and management has had to take much greater care in the development of rules to protect efficiency. Studies of union impact upon management have invariably emphasized both the immediate "shock effect" of unions upon management and the longer term trend toward rational and systematic management of manpower.[1]

The regulation of external product and labor markets have received much less attention in the literature on collective bargaining, but it is an important device for facilitating economic mobility, particularly when economic or technological constraints block other avenues of advancement. Early examples of the need to "take wages out of competition" are found in the history of unions in coal mining, printing, apparel and so forth.[2]

But unions have subsequently found that organizing the entire market is not the only way to relieve economic constraints facing the organized sector. Building trades unions and the apparel unions are among the most active proponents of minimum wage or prevailing wage rate legislation, not because their members are affected directly by such regulations, but because it reduces the competition from non-union employers.[1] Maritime unions lobby for subsidies to shipping, building trades unions support the highway lobby, and aerospace workers favor defense spending. Steel, electrical, textile and shoe unions are active advocates of tariffs and quotas to bring about "orderly" competition. There are even examples of unions directly restraining trade in product markets, through secondary boycotts, and the control of competitive relations among enterprises in industries such as mining and food retailing.[2]

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[1] Slichter, et. al., op. cit., Chs. 2,31.

[2] These were industries which, in the nineteenth and early twentieth centures, were experiencing rapidly growing product markets, bringing goods produced in one area into competition with goods produced in other areas. Under such circumstances the low cost producers could capture a large market share and effectively limit union wage increases. As a result, unions struggled to organize the entire product market in order to "take wages out of competition". L.Ullman, The Rise of the National Trade Union (Cambridge, Mass.: Harvard University Press, 1966) 2nd ed. Ch. 3.

Bargaining power and regulatory power often go hand in hand. Direct bargaining will be most successful where technology permits long vertical upgrading ladders and where the potential for managerial innovation and improved efficiency is greatest. Often these are also areas where labor and product markets can be most readily regulated. Where market regulation and collective bargaining have been most successful in improving wages and working conditions, the corollary has been increased restrictiveness on entry to such employment either through direct imposition of entry quotas (as in apprenticeship programs or longshoring) or through increased selectivity in hiring.

II. Unionization, Earnings, and Economic Mobility

Unionization can affect earnings in a variety of ways. Sometimes wage rates are raised, in other cases, annual earnings are affected. Unionized workers may get more stable work. They may get more pay but less desirable working hours, or easier work and longer vacations. Obviously no single measure can capture all the dimentions of this process, but for the purposes of this study, measuring the effect of unions upon the income and economic mobility of various labor force groups provides a useful beginning.

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[1] D.Q. Mills, Industrial Relations and Manpower in Construction, (Cambridge, Mass.: M.I.T. Press 1972) pp. 81-83.

[2] See, for example, Lesnick, "The Gravaman of the Secondary Boycott" 62 Columbia Law Review 1363 (1963), United Mineworkers v. Pennington 381 U.S. 657 (1965) and Local 189 Amalgamated Meat Cutters v. Jewel Tea Co. 381 U.S. 675 (1965).

Earnings Influences

Unions should affect earnings in several ways. First is the effect on wage levels. Usually an equilibrium structure of wages is postulated in which W_i, wages in the i^{th} group (where i represents either an individual, occupation enterprise, or industry), vary according to the skill and nonpecuniary aspects of employment and where factors of production are freely substitutable. Union effects are then measured by deviations of W_i^*,the observed wage rate, from W_i that are systematically related to some measure of unionization.

Union effects measured this way, however, capture what must be largely a disequilibrium condition. If employers control the hiring process and operate under the rule of "hiring the best available", then higher wages should lead to increased quality of new hires. More generally, the average "quality" of the work force should improve over time as the employer adjusts to wage levels above the equilibrium through a combination of lay-offs, capital-labor substitutions, and the hiring of higher quality employees. Only where unions can control entry criteria in ways unrelated to market considerations should that type of adjustment not occur. At any point in time an observed effect of unions on wage levels therefore must imply either (a) an incomplete adjustment through compensating non-wage variables; (b) a continuing ability of the union to keep wages at a disequilibrium level through successful wage negotiations or through control over employment; or (c) a change in the organization of production that increases fixed employment costs, thereby "protecting" a union wage differential even in equilibrium.[1]

The second possible effect of trade unions is to "twist" the age-earnings profiles of its members by changing advancement opportunities and the stability of employment. This may be accomplished in manufacturing enterprises through the use of seniority in lay-offs, seniority-related fringe benefits, and greater promotion from within. In craft situations, systematic referral systems may provide similar twists.

Apprenticeship programs and promotion by seniority should affect the "steepness" of the hourly wage profile, making it lower for young workers and higher for older workers. Continuity of employment should affect annual earnings profiles, but not hourly wage profiles. Seniority-related pay premiums should appear either in wages or in annual earnings, but their net effect on the position of the age-earnings curve is indeterminate -- less senior workers will often get extra shift pay or overtime, more senior workers may get more lucrative job assignments or those on preferred shifts.

Earnings Levels and the Age-Earnings Twist

These various union wage and earnings effects have been explored by analyzing the data on earnings from the 1967 Survey of Economic Opportunity through a regression model permitting control for the effects of union membership and other factors thought to influence wages.[1] From this analysis, estimates of the effects of unionization upon wage levels by sex, race, and education were obtained. As shown in Table I, unionization has a positive effect for all race, sex, and educational groups. The union contribution is generally greater for white males than for women and non-whites, but both the relative and absolute benefits are greater for the less well educated.

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[1] This is an extension of the general theorem of the fixity of labor as a factor of production. See Oi, *op. cit.*

To estimate the effects of unionization on the shape of the age-earnings profile, three sub-samples of the SEO Survey -- relatively low skilled service workers, skilled and semi-skilled production workers, and apprentices and skilled craftsmen -- were selected as a proxy for the union effect upon economic mobility. These groups were constructed so as to reflect both customary employment and upgrading patterns and differences in bargaining structures between craft and enterprise employment situations.[2] Separate earnings functions were then estimated for various age groups within these occupational sub-samples to provide a measure of union effects upon hourly earnings and annual income after controlling for education, location, race, sex and so forth.

The results, as reported in Table II, generally confirm that unionization affects both the level and the slope of the age-earnings relationship. For service workers (the main focus of this study), the union effect upon both hourly and annual earnings is greatest for younger workers, declining steadily after age twenty-four. Slightly less unemployment is also experienced by union workers. These profiles, however, are not highly re-

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[1] See the Statistical Appendix for more details.

[2] While this approach does not capture mobility between groups, it approximates labor force groupings within which there is thought to be considerable economic interdependence. It also neglects workers who transfer from non-union to union employment.

Table I

Estimates of Union Effects on Hourly Earnings by Sex, Race and Education: United States 1967

Sex, Race and Education	Absolute Union Earnings Effect	Average Hourly Earnings (Union and Non-Union)	Relative Union Earnings Effect (Calculated at mean)
White males			
8 or less years	$.69***	$2.44	28.3%
9-11	$.53***	$2.68	19.8%
12	$.30***	$3.18	9.4%
White females			
8 or less years	$.37***	$1.64	22.6%
9-11	$.37***	$1.74	21.3%
12	$.27***	$2.08	13.0%
Non-white males			
8 or less years	$.65***	$1.98	32.8%
9-11	$.32***	$2.18	14.7%
12	$.36***	$2.54	14.2%
Non-white females			
8 or less years	$.21***	$1.28	16.4%
9-11	$.29***	$1.46	19.9%
12	$.10*	$1.82	5.5%

*** Significant at the .01 level

* Significant at the .10 level

Source: Calculated from Survey of Economic Opportunity 1967

Table II

Percentage Effects of Unionization on Earnings: By Age and Occupation

(t statistics in parentheses)

	20-24	25-34	35-44	45-54	55-64
Total sample:					
Hourly earnings	23.6 %	20.2 %	24.4%	23.4%	22.0 %
	(6.16)	(8.48)	(10.64)	(10.12)	(6.44)
Annual earnings	22.4	19.4	22.0	25.8	18.9
	(4.81)	(7.17)	(8.61)	(9.90)	(5.60)
Selected service workers:					
Hourly earnings	28.6	12.5	-3.0	3.5	9.7
	(2.57)	(2.29)	(-.537)	(.708)	(1.50)
Annual earnings	25.3	12.7	8.4	9.4	8.8
	(2.43)	(1.89)	(1.45)	(1.68)	(1.52)
Production workers:					
Hourly earnings	7.5	6.5	14.5	14.2	6.9
	(1.59)	(1.78)	(4.79)	(4.48)	(1.44)
Annual earnings	9.5	5.0	10.5	16.4	3.3
	(1.25)	(1.12)	(2.67)	(4.04)	(.562)
Craft workers:					
Hourly earnings*	21.3	25.2	33.5	27.9	24.3
	(1.33)	(6.25)	(8.86)	(6.87)	(3.83)
Hourly earnings	N/A	21.9	32.0	25.2	19.3
		(5.52)	(8.20)	(6.12)	(2.78)
Annual earnings*	19.5	27.6	27.2	35.8	27.7
	(2.48)	(6.70)	(6.25)	(8.03)	(4.10)
Annual earnings	N/A	23.7	22.5	28.3	18.8
		(5.58)	(5.01)	(6.24)	(2.84)

*Controlling only for education, race and sex

Source: Derived from Survey of Economic Opportunity 1967 liable since since the sample was small and many of the estimates have large standard errors.

Much more reliable estimates were obtained for the craft and production worker groups. Workers in craft unions received relatively greater overall benefits than production workers, but unionized production workers showed a stronger pattern of benefits increasing with age. The union influence on hourly earnings for production workers more than doubled, going from 6.5% to 14.2% from the beginning to the end of the prime age bracket 25-54. For annual earnings it more than tripled, going from 5% to 16.4%. Annual unemployment declined steadily with age for this group as well.[1]

For craft workers, union effects on both hourly and annual earnings were roughly comparable. Among prime age workers, union effects on hourly earnings peaked for the 35-44 year old group, but annual earnings rose more gradually with age and peaked in the 45-54 year old category. Some, but not all, of the difference between hourly and annual earnings patterns can be traced to unemployment. Younger craft workers have slightly more favorable employment experience than older workers, possily as a result of systematic apprenticeship assignments. Relatively higher unemployment among the high hourly wage, 35-44 year-olds somewhat reduces their annual earnings.

The general pattern that emerges is that unionization provides large benefits in hourly earnings for young workers who obtain union employment. Among production workers, seniority-related job security, promotions, and job assignments impart a strong age effect to the influence of unionization. The positive, but less

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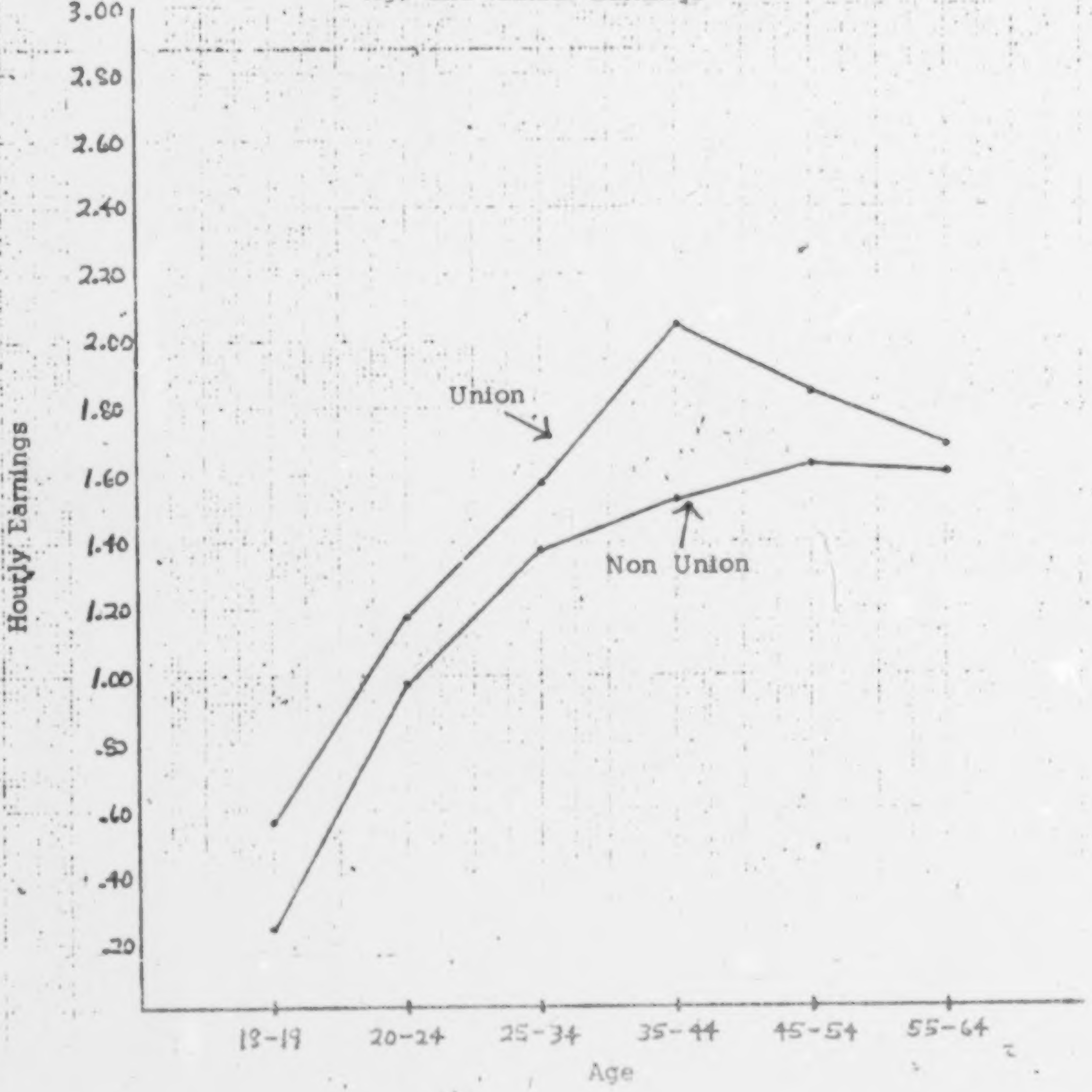
1. For production workers under twenty-five, union effects were much greater on hourly earnings than on annual earnings, although the standard errors were fairly large.

Figure II

Craftsmen and Apprentices:
Age and Annual Earnings



Craftsmen and Apprentices: Age and Annual Earnings

Figure III

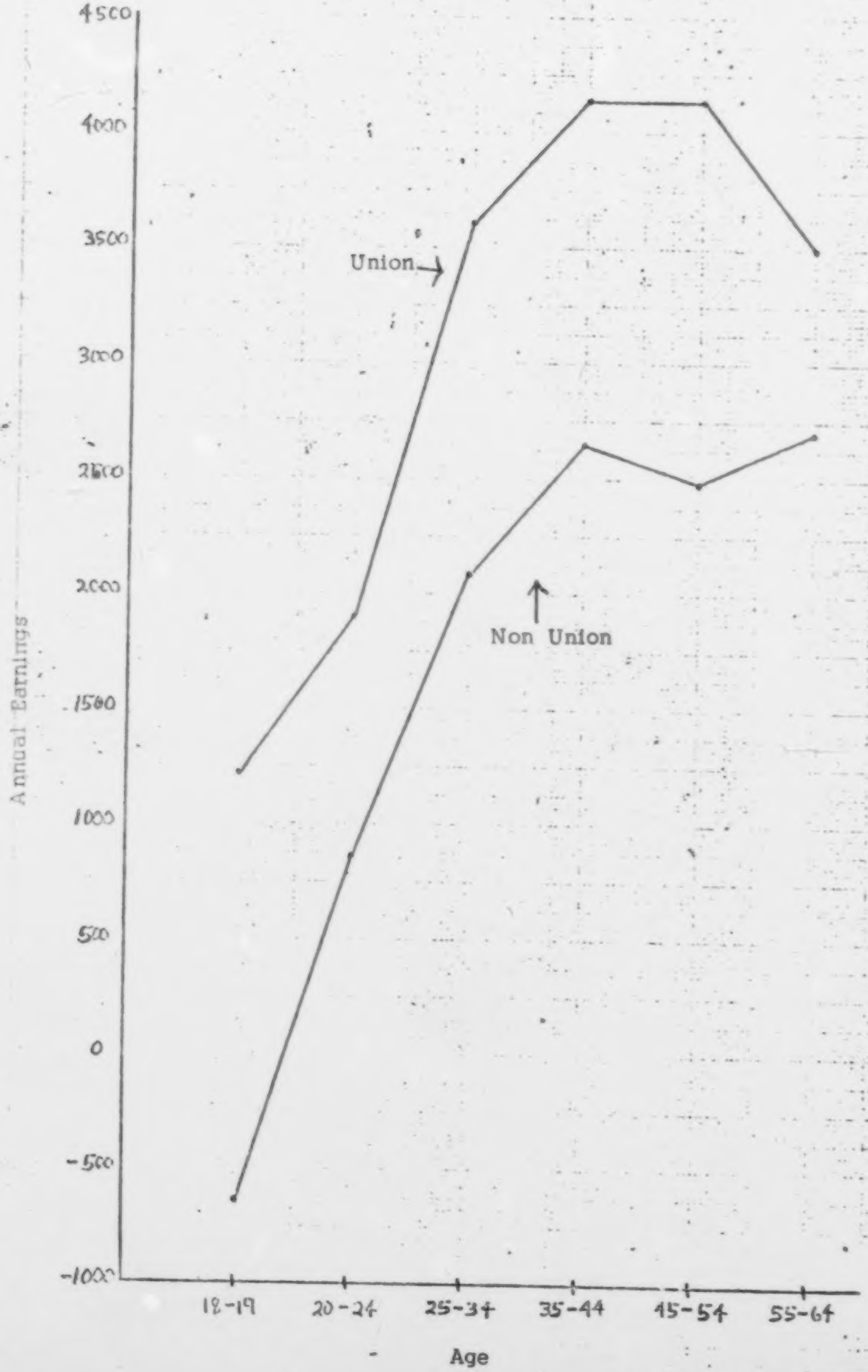


Figure IV

Semi-skilled and skilled production workers :
Age and Annual Earnings

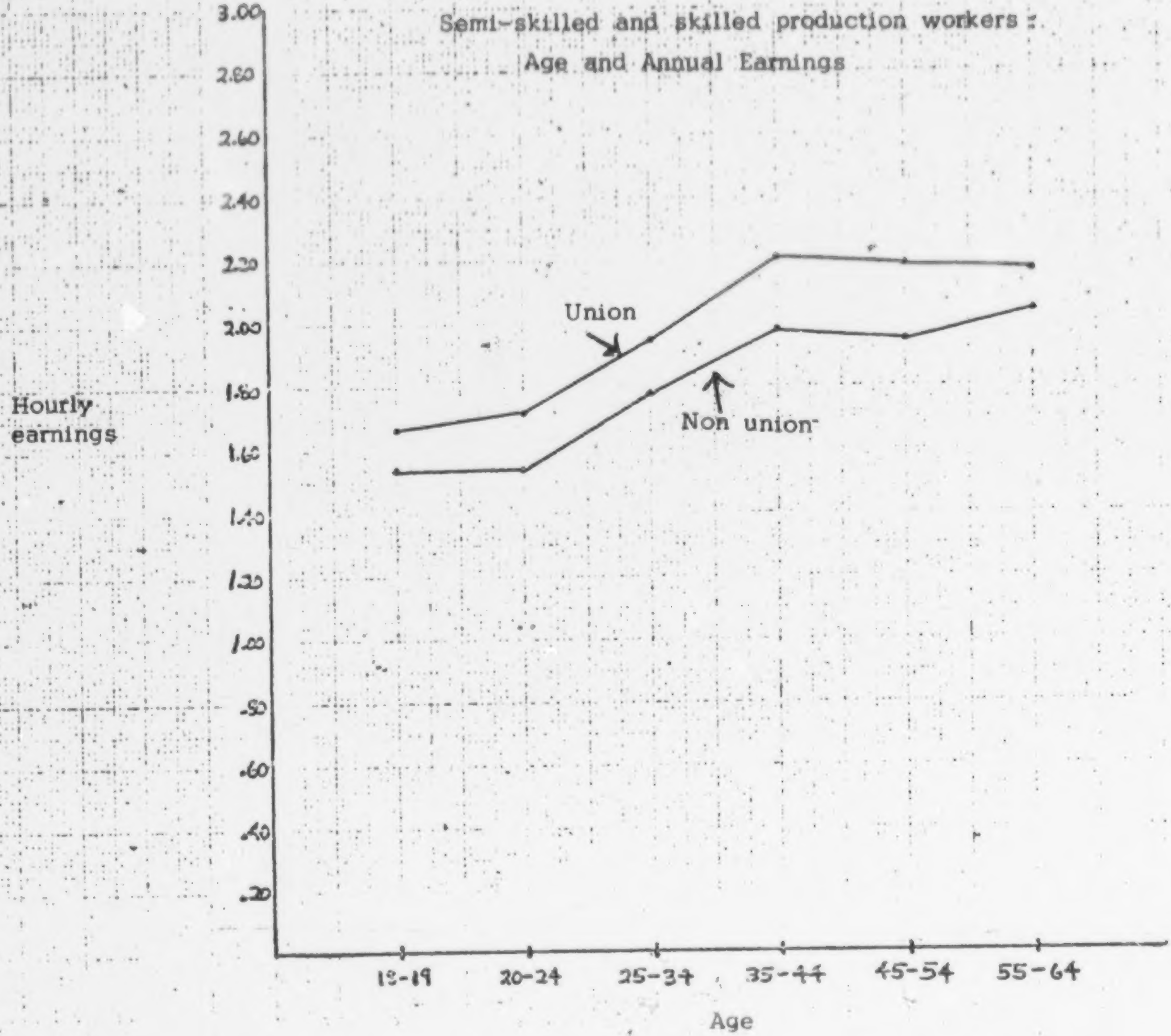
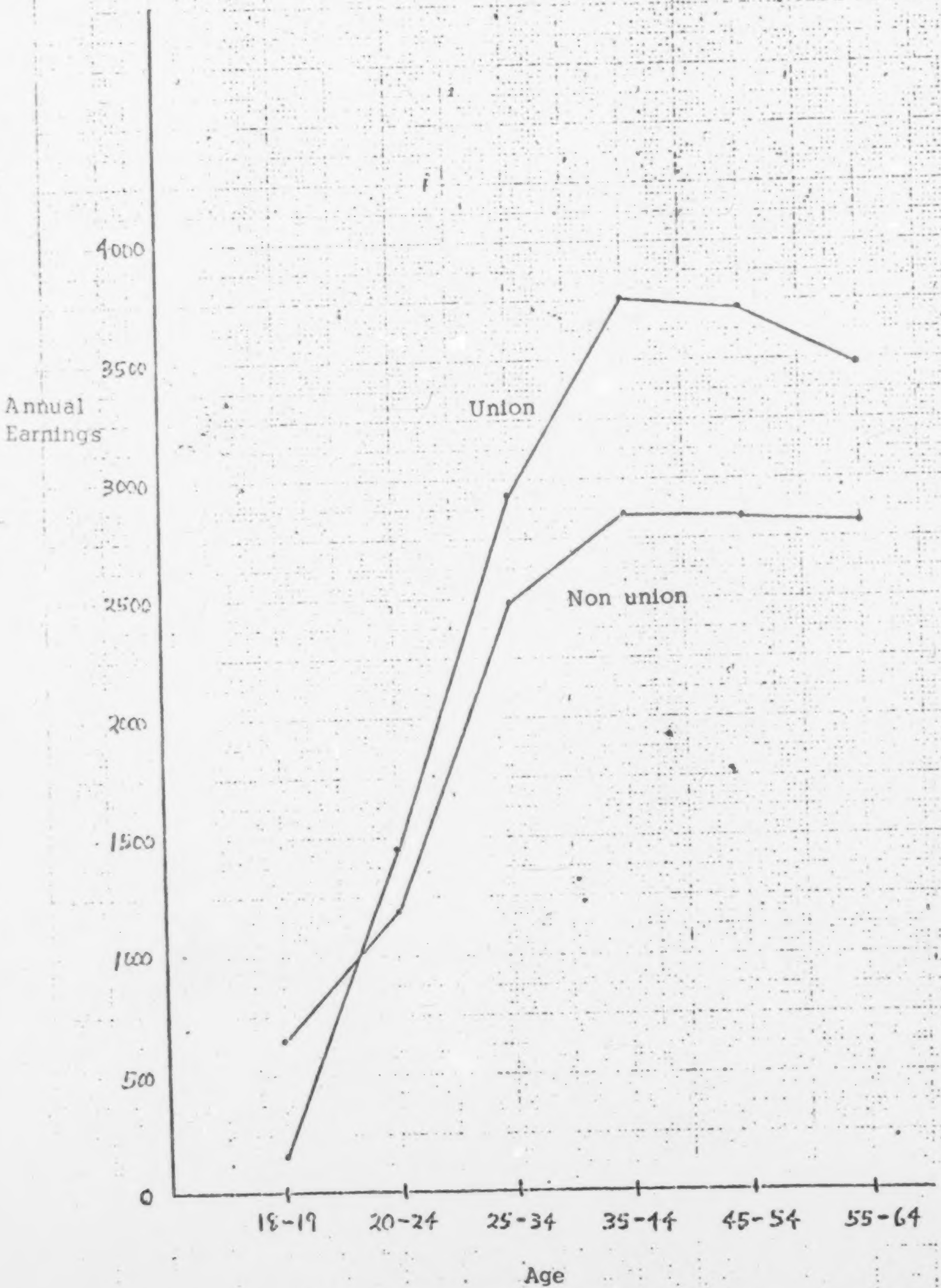


Figure V

Semi-skilled and Skilled Production Workers:
Age and Annual Earnings



steep, age trend in union effects upon craft employment is consistent with apprenticeship and work assignment practices in craft occupations. Comparing union and non-union age-hourly earnings profiles for craft workers, both groups show relatively parallel improvements as can be seen from Figure II. But when age-annual earnings profiles are compared, as in Figure III, unionized craft workers do relatively better in the youngest (18-19), and the older (45-54) age groups. Exploring this result further it seems that young union craftsmen, presumably apprentices, have much more stable employment than their non-union counterparts, as do union workers in the 45-54 year old groups. The union effect in the craft group thus consists of general increase in wage levels and improvement in employment for apprentices and for older workers that manifests itself in annual earnings.

For production workers, the age-hourly earnings relationships are also roughly parallel for union and non-union workers. (See Figure IV.) The comparison of annual earnings relationships, however, again shows unionized production workers having a much more pronounced upward slope as shown in Figure V.

Age "Twists" in Union Membership

The overall effects of unionization upon career mobility are distorted by the preceding analysis to the extent that there are differences in rates of change among occupational groupings between union and non-union workers. Moreover, there will be a downward bias to the career effect if unionization is a function of age within the occupations studied, since non-union workers will experience a one-shot wage increase when moving into union employment. While the former effect could not be treated within the confines of this study, the latter effect, the age twist in union membership, does occur. As can be seen from Table III, there is a substantial increase (more than double in the case of white,

Table III

Percentage of Work Force Unionized by Occupation, Age, Race, and Sex 1970

	18-24	25-44	45-64	All Ages
White Males				
All occupations	17.8%	30.0%	34.9%	27.6%
Blue collar workers	24.6	48.8	53.3	42.8
Craftsmen etc.	26.1	44.7	50.2	44.0
Operatives etc.	26.4	53.4	59.1	40.2
Non-white Males				
All occupations	17.2	34.1	36.1	30.0
Blue collar workers	21.8	41.7	44.7	36.6
Craftsmen etc.	14.8	44.6	48.3	40.2
Operatives etc.	29.1	44.4	50.1	41.8
White Females				
All occupations	7.0	10.3	13.1	10.3
Blue collar workers	16.4	26.8	34.4	27.1
Operatives etc.	17.9	27.2	36.3	28.5
Non-white Females				
All occupations	10.5	17.7	12.8	13.8
Blue collar workers	17.4	37.1	33.8	31.5
Operatives etc.	16.8	38.0	33.2	31.6

Source: Derived from Selected Earnings and Demographic Characteristics of Union Members, 1970 . Report 417 USDL-BLS 1972, Table 5 manual workers and more than triple in the case of non-white craftsmen) in the proportions of young workers and prime-age workers who are unionized. Thus, a large fraction of younger workers step from non-union to union employment during their working lives. Although the proportions vary by race and sex, the probability of union membership increasing with age is a pattern common to all labor force groups with the possible exception of non-white females.

Summary

The quantitative analysis in this Chapter confirms earlier findings that unionized workers, regardless of occupation, receive higher earnings than roughly comparable non-union workers. However, in addition to the overall earnings effect, unionization also imparts a twist to the lifetime earnings profiles of prime-age workers in craft and production work. These twists are consistent with a priori notions of the employment structure and industrial relations arrangements governing work assignment in these occupations. Unionized production workers appear to move into higher paying jobs, and to achieve more stable employment as they age. Among craft workers, hourly earnings increase with age, but continuity of employment is greatest for apprentices and for older prime-age workers.

Unionization is related to career mobility in two ways. It raises and twists the age-earnings profiles of workers who are union members and who remain within a related class of occupations during their entire work careers. But this understates the larger effect of unions on economic mobility by neglecting those persons who transfer from the non-union to the union sectors during their working lives. The strong age component to union membership suggests that substantial numbers of persons fall in this latter group, thereby gaining additional improvement in their economic mobility. For the disadvantaged, although union membership is less easily acquired, relatively greater gains are forthcoming to those in unionized employment.

V

Low Pay, Collective Bargaining and Market Duality in Industrialized Countries

Is labor market duality and its relationship to collective bargaining peculiar to the United States and its labor market institutions, or is it a more widespread market phenomenon? Answering this question definitively would require a detailed examination of labor force and earnings data, enterprise behavior, patterns of labor mobility, and industrial relations arrangements in a number of countries. The beginnings of such a study are presented in this Chapter based upon limited survey data pertaining to low paid workers, and other available source materials.[1]

I. The characteristics of Low Wage Labor Markets: An International Comparison

In this section, the features of low wage employment in Great Britain, Sweden and Japan are briefly reviewed. The definition of low pay adopted is approximately that of the lowest decile of earnings among non-agricultural employees. Because of the differences in definitions and variations in the detail of labor market data in different countries, this definition can be only loosely followed.

The outlines of the low paid labor market that emerge, however, do not seem to be highly sensitive to the precision of the definition used. The pattern is roughly the same in all countries; low paid workers are typically the young, females, ethnic minorities, and the poorly educated. They work in low skilled jobs in agriculture, retail trade, services and non-durable manufacturing such as food processing or apparel.

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[1] Some materials in this Chapter were made available through research undertaken at the London School of Economics where the author was a lecturer during 1971-72 and some through the auspices and support of the OECD.

Great Britain

Data on the overall earnings distribution for the British labor force are not available. A limited survey of earnings in 1970, however, showed that the lowest decile of earnings for male manual workers was £17.20 compared to £ 8.80 for female manual workers.[1]

As in the United States, education in Great Britain seems to be related to earnings. A survey conducted in 1968 showed earnings levels and education to be correlated at the certificate level (roughly Secondary School level) and above, and a recent experiment with merging earnings and educational data from separate surveys confirms that the relationships hold more broadly.[2]

A detailed study of the industrial characteristics of low paid workers in Great Britain, based upon weekly earnings received by the lowest decile of male employees, found that among the twenty lowest paying industries, seven were associated with apparel and textile production, and the remainder involved primarily government employees and personal services.

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[1] See J. Hughes, "The Low Paid", in P. Townsend and N. Bosanquet (Eds.) Labor and Inequality (London, Fabian Society, 1970), p.168. Data is from 1970 Earnings Survey of the Department of Employment.

[2] See M. Blaug, "The Private and Social Returns on Investment in Education: Some Results for Great Britain", Journal of Human Resources, Summer 1967, pp. 330-343; A. Ziderman, "Rates of Return on Investment in Education: Recent Results for Britain", Journal of Human Resources, Winter 1973, pp. 85-97, and N. Bosanquet and P. Doeringer, "Is There a Dual Labor Market in Great Britain", Economic Journal, June 1973. pp. 421-435.

Agriculture and retail trade were also low paid.[1] These low paying industries, with the principal exception of government, had a disproportionately high representation of women workers, ranging from 85 percent female employment in dressmaking to 54.2 percent in woolens. Among the major low paid occupations were: caretakers and cleaners, shop assistants, unskilled assembly workers, catering workers, ancillary staff in the health services and manual workers in government employment.[2]

Age seems to be a more important influence upon low pay for males in Britain than in the U.S. Ninety-five percent of males under 18 fall in the lowest decile compared to 6.1 percent in the 31-40 year old group. For women, however, the concentrations of low pay in various age groups are roughly comparable to the U.S.[3]

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[1] See J. Marquand, "Who Are the Lower Paid Workers?", British Journal of Industrial Relations, November 1967, pp. 359-374. Low hourly pay and low hours worked, combined to yield low weekly pay. See also NBPI, Report No. 25 Pay for Agricultural Workers in England and Wales, June 1967, Command 3199 and NBPI Report No. 27, On the Pay of Workers in Retail, Drapery and Fitting and Footwear Trades, April 1967, Command 3224. More recent tabulations by Bosanquet on low earnings among full-time male employees confirms the ranking of services and distribution at the bottom of the pay hierarchy. N. Bosanquet, Low Pay: An International Comparison of Patterns and Politcies (OECD Mimeo, 1972).

[2] General and Municipal Workers Union, Low Pay-1970, p. 4. A study of low pay by the National Board for Prices and Incomes reached similar conclusions about the incidence and causes of low pay. [NBPI, Report No. 169, General Problems of Low Pay (HMSO, 1971), pp. 9-17, 34-43.] Over time there has been a decline in the proportion of low paid employment in manufacturing and increases in government, construction and food processing. Sex differentials in pay were persistent with a secular narrowing of rate differentials, but not of weekly earnings.

[3] See N. Bosanquet, op. cit., Table 8.

Sweden

About 18 percent of the full time work force in Sweden earn 7.50 SKr. per hour or less (about 15,000 SKr. per year for full-year employees); 6.5 percent of the full-time work force earn 5.00SKr. or less per hour (or about 10,000 SKr. per year).[1]

Lack of vocational training and higher education are associated with low pay, as can be seen from Table I, and earnings differentials between the most and the least educated widen with age.[2]

Table I

Education and Low Pay: Sweden, 1966

Educational category	Proportion Earning 15,000 SKr. or less.
Primary school	19.7%
Primary school plus one or more years of vocational training	15.0%
Lower secondary school and sometimes vocational training	19.4%
Higher secondary school or greater	1.7%

Source: Structure of Incomes in Sweden, pp. 20-21

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1. See N. Bosanquet, op. cit. Table 8.

2. Sweden, Ministry of the Interior: Low Income Commission, The Structure of Incomes in Sweden (Mimeo, August 1970), p. 22.

Within broad industrial categories, the low paid are concentrated in agriculture, wholesale and retail trade, and private services. The building industry is also an important employer of low paid females.[1]

As in Britain and the U.S., women in Sweden are heavily represented among the low paid. Among full-time, full-year workers, 41 percent of the females earned 15,000 SKr. per year or less, compared to only 9 percent of the males. Using the more stringent test of 10,000 SKr. per year or less, only 2.8 percent of the full-time males, compared to 13.4 percent of the full-time females, fell into the low paid group. Median earnings for women are only 66 percent of median male earnings, and at the lowest decile of the earnings distribution of the fully employed, women receive only 52 percent as much as men.[2] The sex differential in earnings increases with education.[3] With primary school education only, women earn 30.4 percent less than men, whereas among holders of high secondary school certificates and above, the differential rises to 40.4 percent.

Sixty-one percent of the young workers, aged 14-19, fall in the low paid category, compared with about 4% in the 31-40 age group.[4]

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1. Ibid, and N. Bosanquet op. cit. Table 6.

2. Ibid., p. 22.

3. Ibid, p. 19. This may be due in part to differences in the sex mix in higher education.

4. N. Bosanquet, op. cit., Table 9.

Japan

Using data for 1970 pertaining to monthly contractual earnings, 13.6 percent of the regular employees in the non-agricultural sector earn less than 30,000 yen per month.[1] If this figure is taken as a rough approximation of the lowest earnings decile, the sectors of wholesale and retail trade, services, and manufacturing have above-average proportions of low paid workers. A more detailed study of low pay within manufacturing found that food, textiles, apparel, lumber, and furniture were the important low paid sectors. These industries are also dominated by small enterprises.

The principle features of wage determination in Japan are the lifetime commitment to employment and the nenkō, or pay-by-seniority system, found in their purest form in large enterprises. While year to year movements within the internal wage structure of the enterprise are governed largely by seniority, the baseline wage from which the nenkō system begins to operate reflects educational attainment.[2] These factors, when combined with pay differentials by size of enterprise, suggest that the low paid are more likely to be younger workers, those in smaller enterprises, the less well educated, and casual workers. Differentials in pay by sex also occur. The effects of age, education, size of firm, and sex are illustrated in Table II. For example, the starting wages of the least well educated workers, and of females with upper secondary school degrees, are all less than 30,000 yen per month. This is con-

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[1] Ministry of Labour, Year Book of Labour Statistics, 1970. Contractual wages are the normal or expected wages for workers specified in their employment contracts. Total earnings consist of the contract wage plus special supplements such as bonuses or back pay. These can amount to anywhere from approximately two to four months' pay, but are mostly about three months' pay. (See Koji Taira, Economic Development and the Labor Market in Japan, pp. 77-79. [New York, Columbia University Press, 1970]).

[2] Makoto Sakurabayashi, "Wages in Today's Japan", Sophia Economic Review, December, 1972. p. 37.

Table II

Annual Earnings by Sex, Education and Size of Enterprise: Japan 1970
(1,000 yen)

Size of Enterprise (# of employees)		Lower Secondary		Upper Secondary		Junior College		College or University	
		(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
10-99	Male	24.9	56.6	30.1	54.6	34.1	80.8	39.1	81.6
	Female	24.3	31.6	26.0	41.6[a]				
100-999	Male	25.5	57.2	30.5	59.7	34.7	84.4	39.1	86.8
	Female	24.3	37.5	28.0	45.0[a]				
1000+	Male	26.2	62.1	33.1	65.5	37.3	92.5	41.2	81.2
	Female	24.9	47.9	34.0	57.4[a]				

a = Upper secondary and above

Col. (1) = starting pay

Col. (2) = average pay, all employees

Source: Yearbook of Labor Statistics, 1970 degrees, are all less than 30,000 yen per month. This is considerably less than the average earnings for all regularly employed workers regardless of sex, size of enterprise, and education, and compares unfavorably with the starting pay of better educated males in larger firms. Earnings of casual workers average less than 1,500 yen per day, or between 30,000 and 40,000 yen on a fulltime basis.

II. Evidence of Market Duality

A. Age-Earnings Profiles and Upgrading

While the characteristics of the low wage labor markets of Great Britain, Sweden and Japan described above seem to correspond with those in the secondary labor market in the United States, this is not sufficient evidence of market duality.

It is difficult to define a single measure of market duality since it can depend on differences on the demand side of the market (internal market structures, discrimination in hiring and promotion, etc.), on differences on the supply side (as in the ability or motivation to learn on the job), or on both. However, one test commonly used by economists is to compare the lifetime earnings profiles of workers to see if those presumed to be employed in the secondary sector show less increase in wages with work experience than those employed in the primary sector. Ideally, longitudinal data on earnings would be used for this test, but economists are ordinarily forced to rely on "second best" data from cross-section studies as a basis for making inferences about the longitudinal behavior of earnings.

In the United States, women and blacks earn less per year of education than do white males, suggesting that discrimination and low education interact to produce low earnings.[1] In addition, females and blacks also seem to receive less training on the job once they enter the labor market, as can be seen from the differences in age-earnings profiles (after controlling for the effects of a wide range of variables presumed to influence income) between better-educated white males and other workers. These same symptoms of duality can be found in other countries as well.

Great Britain

A cross-section study of occupations such as sales workers, managers, engineers and technical workers showed the impact of both education and sex on the earnings of working in different age groups. Highly educated males earn more to start with, and their earnings increase more rapidly than do the earnings of equally well educated women, as can be seen from Figure I.

A preliminary attempt has also been made to construct age-earnings profiles for men and women, controlling for the effect of education, that are more comprehensive than those previously available in Britain. Although the occupational coverage is by no means complete, and the analysis is highly

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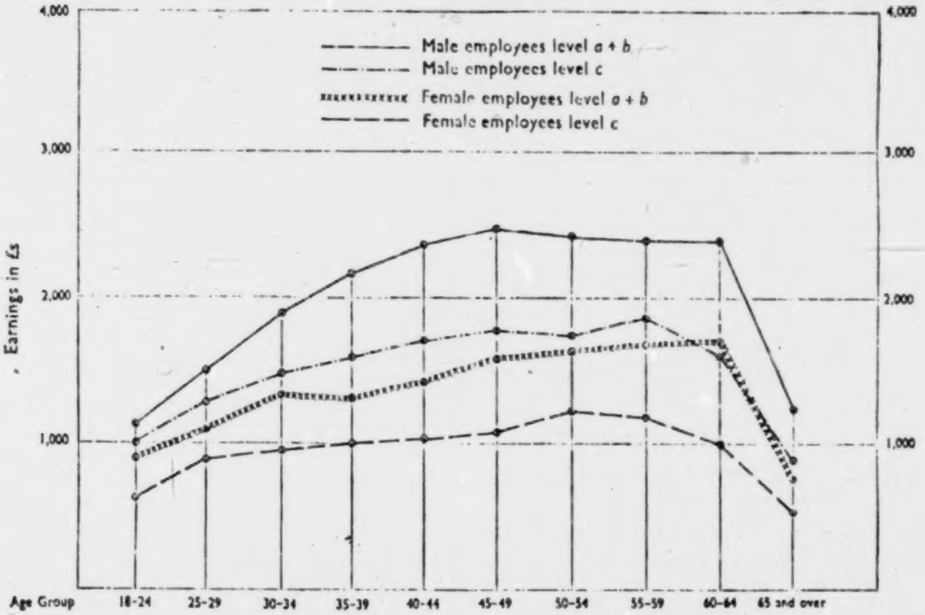
[1] See J. Mincer, "On the Job Training: Costs, Returns and Some Implications", Journal of Political Economy (Supplement, October 1962). See also Robert E. Hall, "Why is the Rate of Unemployment so High at Full Employment?" Brookings Papers on Economic Activity, No. 3, 1970, pp. 349-402, and Arthur J. Alexander, Income Experience and the Structure of Internal Labor Markets, Rand Corporation Memo P-4757, January 1972.

Figure I

Median Earnings of Employees by Level of Qualifications: England and Wales (1966-1967).



Source: Statistics of Education Special Series No. 3, H.M.S.O. 1971, p. 2.

Level *a* = Higher degrees excluding first degrees
b = First degrees
c = Diplomas and certificates below first degrees

provisional, the results as shown in Table III and Figure II suggest two important conclusions that coincide with findings in the United States.[1] First, women receive lower earnings benefits from years of schooling than do men, but this differential is greatest for less well-educated, presumably most disadvantaged, females workers. For example, an additional year of schooling at age 15, is worth ¥8.62 per week for men, but only ¥3.81 per week for women. Second, women receive relatively less training and smaller income increases over their lifetimes than do similarly educated men, and the income disparity appears to increase during the middle working years, as is shown by comparing the earnings increments of men and women in different age groups.

Sweden

Data on age and earnings controlling for education is limited in Sweden to materials gathered as part of the Low Income Commission's studies. The age-earnings profiles of persons with only a primary school education compared to those of persons with secondary school certificates or more advanced degrees show that the earnings differential between these two groups increases with age. (See Table IV.)

Detailed breakdowns of earnings by sex are not available in Sweden, but from limited evidence it appears that poorly educated females are economically worse off than comparably educated males. Both cross-section and time series earnings data by sex and social class also seem to confirm the conclusion that the least well educated and females tend both

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[1] For a more complete description of the data reported in Figure II and Table III see the Appendix.

Table III

Estimated Incremental Contribution of Age and Education to Median Earnings: By Sex

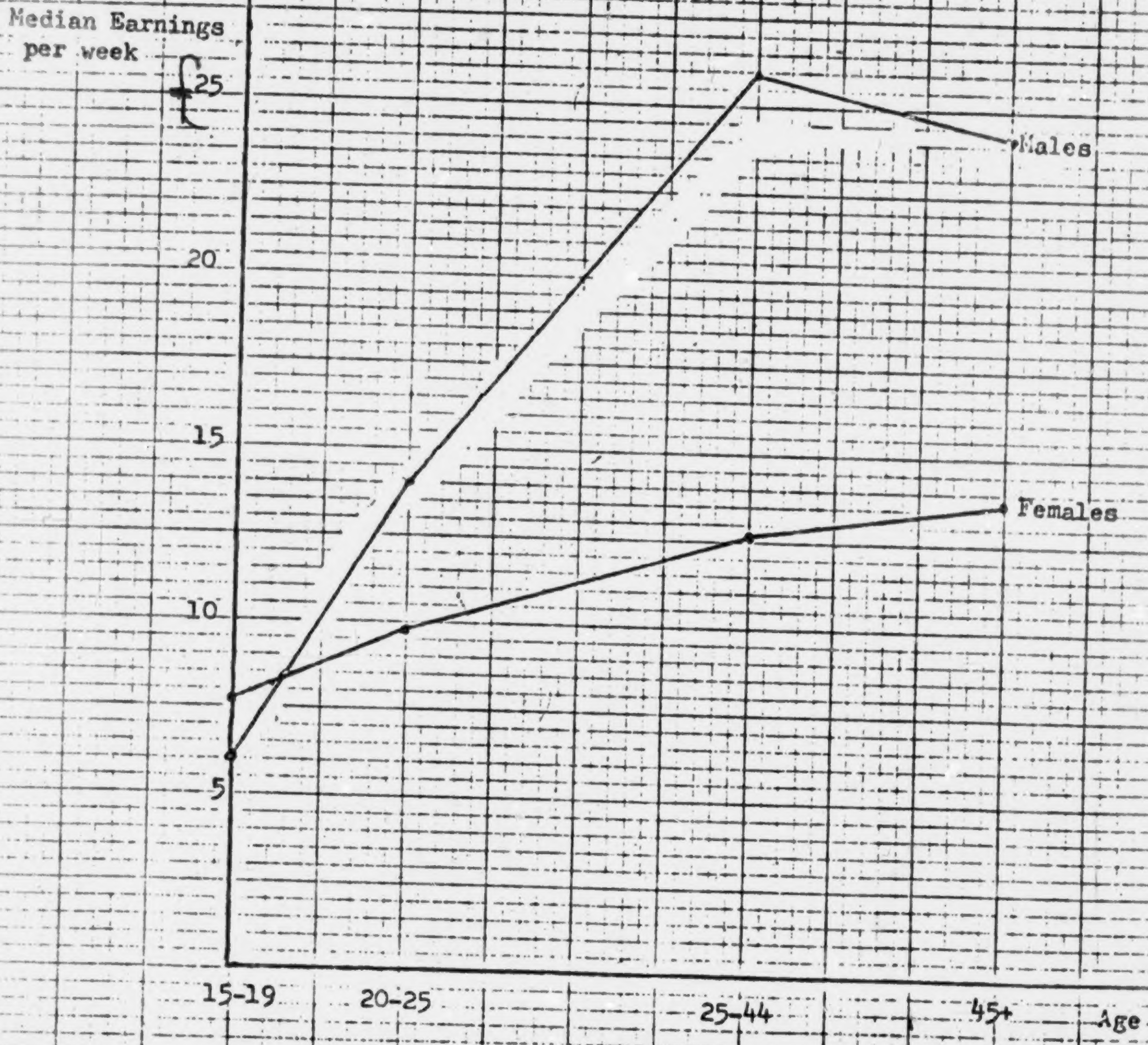
(in pounds per week, 1970)

	Age			Education Level (School Leaving Age)				
Workers age 15-19 having left school at less than 15 years of age	20-24	25-44	45+	15	16-18	19+	$\bar{R}^2$	d.f.
Male £6.06*	8.05***	19.93***	18.17***	8.62***	9.84***	12.29***	.64	43
Female £7.74***	1.93	4.89*	5.92**	3.81*	5.64**	16.51***	.78	21

* = significant at .05 level
** = significant at .01 level
*** = significant at .001 level

Figure II

Age and Earnings, Adjusted For Education: By Sex
(in £'s per week 1970)



Source: Derived from United Kingdom census 1961 and Department of Employment New Survey 1970.

[Census figures relate to England and Wales and D.E. Earnings figures to Great Britain].

to start out earning less, and to receive relatively less economic advancement than well-educated males. (See Figures IIIA & IIIB).[1]

Table IV

Earnings Index of the Well-Educated (Higher Secondary and above): Sweden 1966 (Primary School Graduates = 100)

	Age			
	14-24	25-34	35-44	45-64
Index	135	155	188	227

Source: The Structure of Incomes in Sweden, p. 21.

Japan

The earnings differential between the better educated and the poorly educated widens consistently with age and experience in the labor market in Japan. As might be expected, this differential is most pronounced for experienced, well-educated workers in large firms. (See Figure IV and Table V). Women in general appear to have relatively little earnings growth with experience, with the least well educated in the smaller firms showing the least advancement over time.[2]

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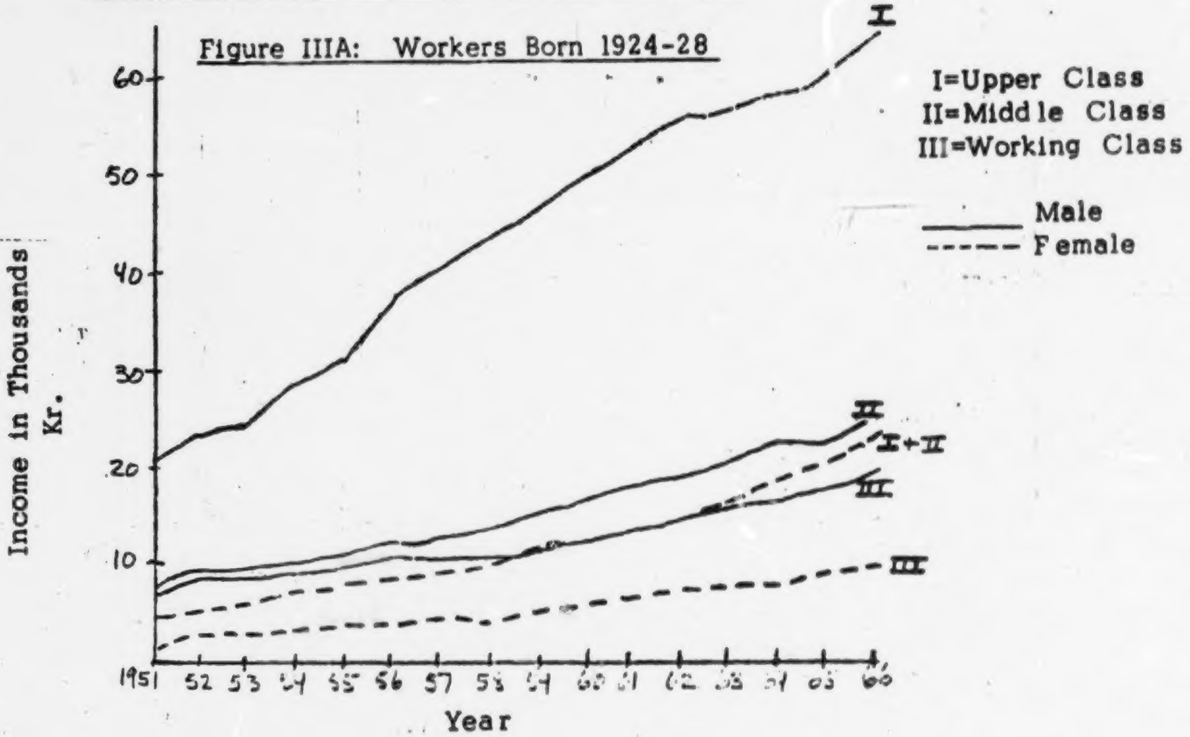
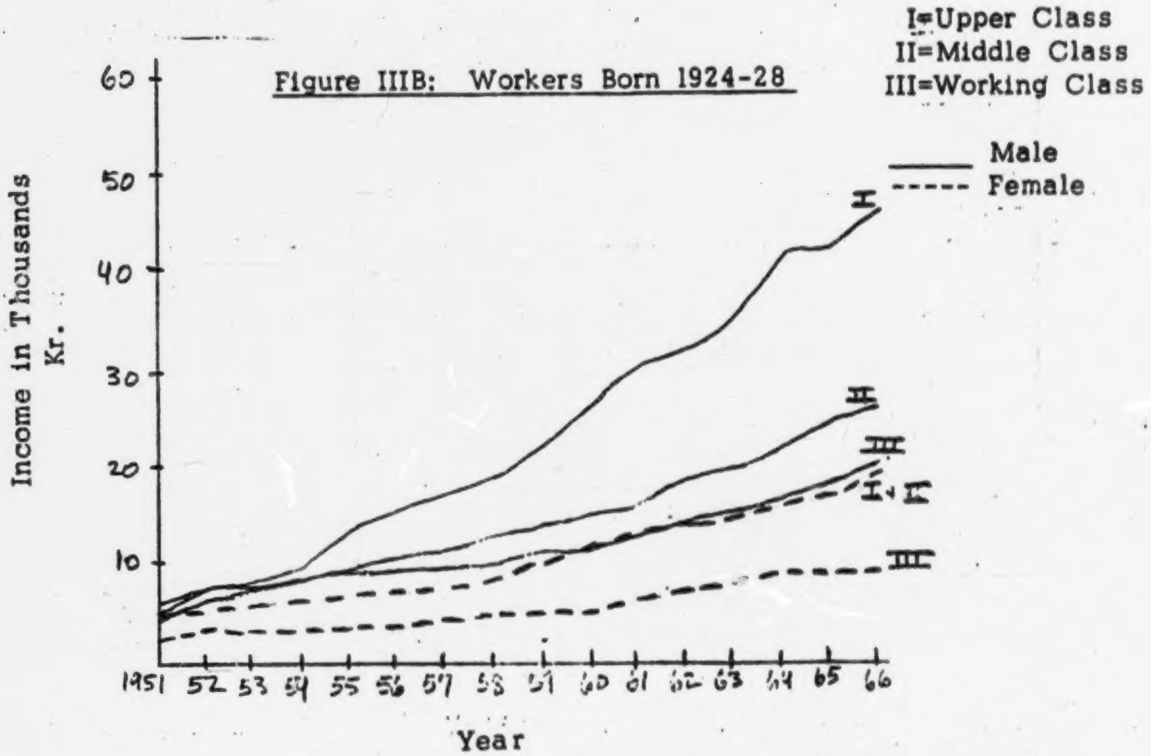
[1] I.Ericksson, Adler Och Inkomst, (Study paper No. 9. of the Swedish Low Incomes Commission). Chapters IV-V.

[2] In a recent article, Vladimir Stoikov suggests that size of enterprise and the nenkō system may not be an important factor in the Japanese earnings structure. Unfortunately his data do not permit a test of the interaction between nenkō, firm size, and continuity of employment necessary to demonstrate this conclusion. See V. Stoikov, "The Structure of Earnings in Japanese Manufacturing Industries: A Human Capital Approach", Journal of Political Economy, March/April 1973, pp. 340-355.

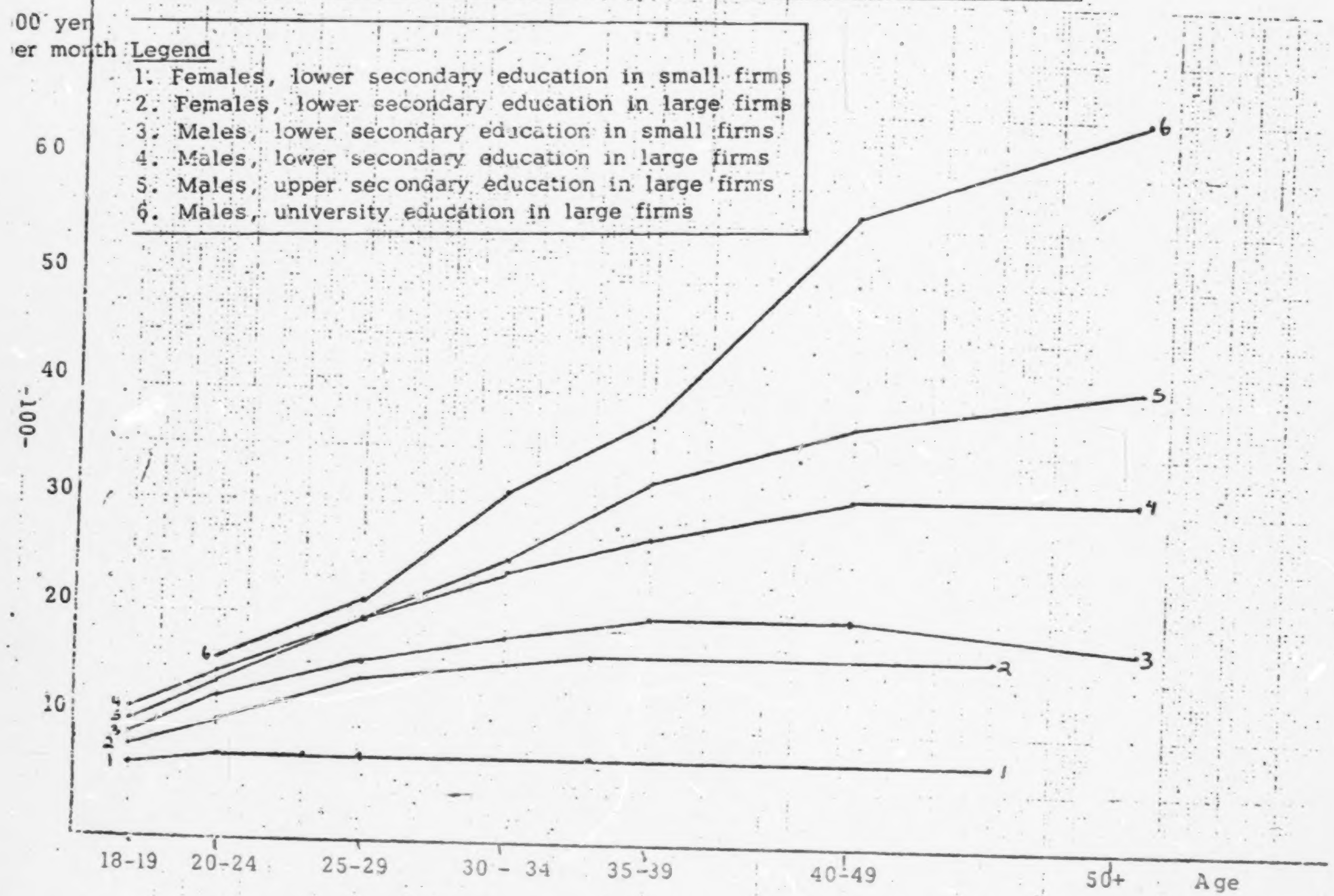
Earnings by Social Class and Sex: Sweden





Source: I. Ericksson, Alder Och Inkomst, (Study Paper No. 9 of the Swedish Low Incomes Commission)

Figure IV



Age-Earnings Profiles by Sex, Education and Size of Enterprise: Japan 1959

Table V

Earnings by Age, Education, Sex, and Size of Enterprise: Japan 1959
(1,000 Yen)

Age	18-19	20-24	25-29	30-39	40+
Females					
Lower Secondary School Education in firms with 10-99 employees	6.7	7.5	7.7	7.4	7.5
Upper Secondary School Education in firms with 10-99 employees	6.5	8.0	9.6	10.7	11.0
Lower Secondary School Education in firms with 1000+ employees	8.2	10.3	14.4	16.5	16.8

Age	18-19	20-24	25-29	30-34	35-39	40-49	50+
Males							
Lower Secondary School Education in firms with 10-99 employees	9.1	12.4	15.6	17.9	19.5	20.0	17.7
Upper Secondary School Education in firms with 10-99 employees	8.2	11.5	16.8	20.9	23.1	25.5	23.8
Lower Secondary School Education in firms with 1000+ employees	11.3	14.6	19.5	23.9	27.0	30.7	30.9
Upper Secondary School Education in firms with 1000+ employees	10.5	13.7	19.3	25.1	32.2	37.3	40.8
University education in firms with 1000+ employees	--	16.0	21.3	31.3	37.8	56.0	64.8

Source: Japan, Yearbook of Labor Statistics: 1959, Table 106.

B. Discrimination

The problem of pay and earnings differentials by sex has been examined in the preceding section and needs little additional emphasis here. After controlling for the effects of education and age, women in all the countries earn less than their male counterparts. This finding seems to apply even when a larger range of factors such as occupation, industry, geographical location, trade union membership, and the like are considered.

It might be argued that sex differentials in pay represent different levels of productivity between men and women and that lower investments in on-the-job training among women occur as a result of weak or intermittent attachment to the labor force. But direct observations of pay differentias and of employment segregation suggest that discrimination must be a widespread factor in market duality.[1]

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[1] See Lydall, op. cit., pp. 242-243. Women are disproportionately represented in lower paying industries and occupations in all countries and within occupations they receive less pay than men. For example, in England for lower paying jobs such as unskilled apparel work, junior clerks, shop sales assistants, and catering occupations, full-time women workers receive only one half to two-thirds the earnings of males. (D.E.P. Earnings Survey 1970, Table 150,p. 243.) In only one low wage occupation reported, bus conductors, do females and males approach earnings parity. While some of this differential may be explained by performance differences under payment by results systems, discrimination is also likely to be a factor since there are also observable differences in rates of pay for men and women. (See N. Seear, "The Position of Women in Industry," Royal Commission on Trade Unions and Employers' Associations, Research Paper 11.1 (London: HMSO, 1968). Moreover, the results of a survey of equal pay policy in forth-four firms in England showed that 91% had "women only" jobs, primarily in the clerical and unskilled areas, and 73% reported that some jobs were closed to women. (V. Hanna, "Equal Pay, Industrial Apartheid as Firms Evade the Act", The Sunday Times, November 21, 1971, p. 65) In Sweden, the Low Income Commission concluded that sex was one of the major determinants of earnings differences. (The Structure of Incomes in Sweden, op. cit., p. 25.)

Racial or ethnic discrimination also affects earnings in some countries. Racial discrimination in the United States is a classic example of this problem and there is fragmentary evidence that ethnic discrimination in employment is present elsewhere as well. In Sweden, male immigrants are employed in sectors where native-born males workers tend to reject jobs.[1] In Japan, the Eta are employed in jobs, such as meatcutting, that are considered "unclean" by the Buddhist majority.[2] In England, it is usually the less attractive industries--foundries, textile , clothing, bakeries, bus transport--that turns to colored labor as a second-best source of workers.[3] Within enterprises, the colored workers are customarily assigned to the less desirable and deadend types of jobs.[4]

III. Labor Market Dualism and Industrial Relations

The data on age-earnings profiles and on discrimination from the four countries studied broadly conforms to the dual labor market thesis -- that low education and discrimination interact to place disadvantaged workers on relatively dead-end earnings paths in contrast to the upwardly mobile income

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1. Structure of Incomes in Sweden, op. cit., p. 25.

2. George de Vos and Hiroshi Wagatsuma, (Eds.) Japan's Invisible Race, (University of California Press, Berkeley and Los Angeles, 1967).

3. K. Jones and A.D. Smith, The Economic Impact of Commonwealth Immigration, NIESR - CUP 1970, pp. 168-169.

4. This pattern is further illustrated by the hiring of immigrants in the Yorkshire woolen industry after white males began to withdraw from the industry as working hours were lengthened and undesirable shift-working was introduced. B.G. Cohen and P.J. Jenner, "The Employment of Immigrants: A Case Study Within the Wool Industry", Race, Vol. X, No. 1, July 1968, pp. 41-56.

paths available to more advantaged workers. But this says little about the market processes that produce the observed results.

In the United States, duality was explained primarily by differential access to employment in structured internal labor markets. The major barriers to moving from secondary to primary employment relate to education, on-the-job training and employment discrimination. For the other countries studied, the most that can be inferred from the age-earnings profiles is that advantaged and disadvantaged groups receive different amounts advancement over time. But it cannot be determined conclusively from the income data whether this is the result of either general or specific on-the-job training, or whether internal promitions or external mobility are important features of the advancement process.

Internal Labor Market Structure

Turnover & Job Tenure

Inferences concerning the relative importance of workplace arrangements governing internal mobility can be drawn from data on turnover and job tenure. If enterprise-specific training is a major component of the human capital acquired on the job by advantaged workers, then this group should be more stable in their employment than the disadvantaged. In the United States this appears to be the case. At full employment, virtually all unemployment is short-term and the relatively high unemployment rates among the low paid seem to be due to job changing.[1]

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[1] See Hall, op. cit. p. 389 and George L. Perry, "Unemployment Flows in the U.S. Labor Market", Brookings Papers on Economic Activity, No. 2, 1972, pp. 245-292.

A similar pattern emerges in Great Britain. As in the United States much unemployment in Great Britain is short-term and contains a significant number of chronic job-changers.[1] Between 1953 and 1963, although over half of the work force remained stably employed, 15.4 percent of the men and 6.7 percent of the women continuously attached to the labor force held more than three jobs, while 7 percent of the men and 1.6 percent of the women held six or more jobs. Among workers attached to the labor market for less than the full ten-year period, 54.2 percent of the men and 39.9 percent of the women held more than three jobs; 29.1 percent and 12.1 percent of men and women respectively held six or more jobs.[2] Looking in more detail at job changing by skill level it seems that the least skilled showed the expected higher levels of turnover. Only 38 percent of the unskilled men had held one job for the ten years 1953-1963, and fifteen percent of the unskilled men had held six or more jobs -- a significantly higher proportion than among the semi-skilled and the skilled.[3]

Separate data are not available for turnover by sex or skill in Sweden. But if job tenure is taken as a proxy for turnover, a study of selected occupations and industries showed that white collar workers -- civil servants, insurance employees, and white collar workers in industrial plants -- had longer

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1. While the proportions are not as large as in the U.S., almost half of the registered unemployment between 1961 and 1971 in Great Britain was of 8 weeks or less and 73-81 percent was of less than 26 weeks. Many of the unemployed were experiencing multiple job changes. (See the DE Gazette for various years and especially "The Characteristics of the Unemployed", April 1962, pp. 131-36.

2. A. Harris, Social Survey on Labour Mobility in Great Britain, 1953-1963, Table 56, p. 56.

3. Harris, op. cit., Table 59, p. 58. Similar results emerge

Continued on the next page...

tenure of employment than did manual workers in the low paid sectors such as footwear and textiles.[1]

Given the lifetime commitment to employment in large enterprises in Japan, job changing should be concentrated among the younger employees, those in smaller enterprises, and among casual or temporary employees. Turnover data support this view. Slightly over 6 percent of the employed workers aged 15-19 changed jobs in 1965, falling 2.4 percent for 40-54 year olds and to about 1.5 percent for those aged 55-64.[2] Monthly turnover in firms employing 4-9 workers was more than seven times higher than in firms employing 1000 or more workers, and about five times more than in firms employing 10-30 workers. Among temporarily-employed regular workers, turnover was on average almost five times higher than among permanent regular employees.[3] The turnover rate is also higher among the low paying industries. Separation rates in food processing, textiles, apparel and furniture were all above average, whereas industries such as iron and steel or petroleum experienced separation rates considerably below average.[4]

Footnote #2 continued

if job tenure is considered: 19 percent of the unskilled men had held their jobs for less than three months, while for professional and managerial workers of both sexes the proportion was in the range of 3-6 percent. Ibid., pp. 58-59.

[1] M. Hedburg, "The Process of Labor Turnover", The Swedish Council for Personnel Administration, Stockholm, 1967, p. 77.

[2] See Japan Report of Special Survey of the Labor Force, Office of the Prime Minister, Bureau of Statistics; Labor Force Series 21, March 1966, Table 23.

[3] See Taira, op. cit., p. 170. (Data is for 1957).

[4] Japan, Yearbook of Labor Statistics, 1970, op.cit., Table II.

Enterprise Practices

More direct evidence of structured internal labor markets in the primary sector comes from surveys of enterprise practices. Informal discussions held with employers in England and Sweden do indicate that promotion from within is a preferred staffing arrangement among enterprises in the higher wage sector and that dead-end employment seems more prevalent in low wage jobs. This is also the major distinction between employment in large and small firms in Japan.

The available data on promotions supports this finding. In Britain, data collected in engineering firms (presumably primary type employment) in five cities during a 6-7 year period showed substantial internal mobility. In all but one city, internal job-changing rates among skilled workers were relatively low, ranging from 2.5 - 5 percent; but a higher percentage (ranging from 5.5 to 14.8 percent in different cities) prevailed among the semi-skilled. Non-production workers showed even greater internal mobility, with over half of those hired at the unskilled level experiencing internal mobility during the period of the study in three of the cities.[1] This suggests a certain amount of internal stratification by skill level and department, but a stratification that is permeable. The 1953-63 Survey of Labor Mobility confirms the presence of internal mobility, showing 17 percent of the man and 12 percent of the women changing jobs within their enterprises during the period.[1]

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[1] D.I. MacKay, et. al., Labor Markets Under Different Employment Conditions (London: Allen & Unwin, 1971). Because very broad occupational categories were used the amount of job changing is probably understated. [See D. Gowler and K. Legge, "Skill and Lateral Mobility in the Internal Labour Market" (OECD, Mimeo, November 1972)] See also D. Robinson (ed.) Local Labor Markets and Wage Structures (London: Gower Press Ltd. 1970), Chs. 1,2,7,8.

In Japan, counting both upward and downward transfers within the same enterprise, it appears that about 4.1 percent of the employees in manufacturing changed jobs internally in 1970. In low wage manufacturing -- food processing, textiles and apparel -- the mobility rates were only 2.0 - 3.3 percent. In the higher wage sectors such as chemicals, petroleum, and iron and steel, the rates ranged from 5.3 - 12.9 percent.[2] In Sweden, a union survey showed average job changing within enterprises to be about 3 percent per year, but more detail by sector is not available.[3]

In general, it seems reasonable to conclude that differences in internal market structure along the U.S. lines are a factor in market duality in the other countries studied.

Trade Unions

In examining the relationship between market duality and industrial relations arrangements, the pattern of trade union activity is also important. In the U.S., Great Britain, and Japan there is a striking difference between the primary and secondary sectors in the extent of union membership.

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[1] Harris, op. cit., pp. 52-54.

[2] Yearbook of Labor Statistics, 1970, op. cit., Table 14.

[3] See S.D. Anderman (Ed.), Trade Unions and Technological Change (London, Allen & Unwin, 1967), p. 138.

For example, in the United States, where about 28.5 percent of the non-agricultural labor force is unionized, the probability of being in a union falls substantially at incomes below $5,000 per year.[1] After holding other demographic variables constant, the probability of being a union member is reduced by 11.5 percent among heads of household earning $3000 by $4999, and by 18 percent among those earning $1000 to $1999. Employment in the services and in agriculture also reduces the likelihood of union membership, as does being well educated. Race and sex, however, do not affect the probability of union membership.

In Britain, with 38.7 percent of the non-agricultural work force organized, 10 of the 12 lowest paying industries (and 30 out of the 37 lowest paying industries) are covered by tri-partite wages councils in lieu of collective bargaining arrangements.[2]

Japanese trade unions have organized about 35 percent of the labor force, but union membership is mainly concentrated among the largest enterprises. Almost two-thirds of all employees in firms of 500 or more are organized, compared to about one third in the 100-499 category and 5 percent in firms employing fewer than 30 workers.[3]

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1. See James G. Scoville, "Influences on Unionization in the U.S. in 1966", Industrial Relations, October 1971, pp. 354-361.

2. See Marquand, op. cit, and NBPI, General Report on Low Pay, op. cit., pp. 14, 37.

3. See Robert Evans, Jr. The Labor Economies of Japan and the United States, pp. 214-216. (New York, Praeger, 1971).

Unionism is also weakest in the low paid sectors -- 1.2 percent of the workers in agriculture are organized, 4.1 percent in wholesale and retail trade, and 11.3 percent in services.[1]

Sweden presents a contrasting picture with almost 70 percent of the non-agricultural workforce in unions. Membership in LO, the principal union organizing the low paid, approximates 90 percent of the manual workers group.[2]

In the countries where union membership is limited, and concentrated in the primary sector, it might be tempting to argue that collective bargaining has created the high wage conditions in primary employment. But, much of the causality may go the other way.

In the secondary sector, where enterprises are small, employment is unstable, and product market competition is intense, unions have great difficulties in securing and maintaining their organization. Moreover, where economic gains by unions depend upon their ability to regulate labor competition within a market sector, and to restrict entry and competition from non-union employers, the highly competitive labor and product markets of the secondary sector present severe challenges.[3]

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1. Ibid, pp. 25, 229.

2. See, for example, ILO, The Trade Union Situation in Sweden (Geneva: ILO 1961), p. 38 and T.L. Johnston, Collective Bargaining in Sweden (Cambridge, Harvard University Press, 1962), p. 30.

3. See Leonard W. Weiss, "Concentration and Labor Earnings", American Economic Review, March 1966, pp. 96-117, Martin Segal, "The Relation Between Union Impact and Market Structure", Quarterly Journal of Economics, February, 1964, pp. 96-114, and Harold M. Levinson, Determining Forces in Collective Wage Bargaining, (New York: Wiley and Sons, 1966), pp. 265-66.

Even where economic conditions favor union organization, studies in the U.S. show that the impact of unions on relative wages is not large. Most unions seem to have an independent effect upon wages principally during the early years of a bargaining relationship and during periods of recession.[1] Less detailed research in Japan suggests that unions have made only a marginal contribution to the wage differential in large enterprises.[2]

Unions, however, also shape other kinds of employment conditions in the primary sector. A number of students of industrial relations have suggested that the most significant effect of collective bargaining is not upon wages, but upon the organization of work, the stability and security of employment, and the efficiency and equity of managerial practices.[1] This view would argue for looking at the larger process of dynamic change in productivity, career patterns, training and promotion prospects, employment security and the like, associated with industrial relations arrangements in the sector of the economy where unions are strongest.

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[1] H. Gregg Lewis , Unionism and Relative Wages in the U.S.: An Empirical Inquiry (University of Chicago Press, 1963). There is, however, some evidence that unionization contributes to relatively larger economic gains for the lower skilled than for the higher skilled. By occupation, laborers seem to benefit relatively more than semi-skilled or skilled workers. Estimating union wage effects by education and race (controlling for other relevant factors) seems to lead to a similar conclusion, as was shown in the preceding chapter. [See Sherwin Rosen, "Unionism and the Occupational Wage Structure", International Economic Review, June 1970, pp. 268-286.]

[2] See Koji Taira, Economic Development and the Labor Market in Japan, New York, Columbia University Press, 1970), p. 169.

At least in the United States, much of the trade union emphasis has been upon strengthening the structure of enterprise internal markets. Enterprise-level bargaining, contractual agreements requiring promotion from within, the use of seniority in lay-offs and promotion, limitations on the removal of work from bargaining units, and the tying of fringe benefits to seniority have all served to reinforce and extend the effects of enterprise-specific technology upon job security and promotion within the enterprise.

Even more dramatic effects along similar lines can be found in the results of collective bargaining in large enterprises in Japan. The lifetime employment commitment and pay by seniority in the large enterprise represent an almost complete structuring of the internal labor market. Here the focus of collective bargaining has been on totally removing union members from the vagaries of the external labor market and on guaranteeing them lifetime economic advancement within the enterprise.[1]

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[1] See S.H. Slichter, Union Policies and Industrial Management (Washington, Brookings Institution, 1941), pp. 572-573; S.H. Slichter, "The American System of Industrial Relations" in Arbitration Today, Proceedings of the Eighth Annual Meeting, National Academy of Arbitrators, 1955; D.C. Bok and J.T. Dunlop, Labor and the American Community, Ch. 9; and S.H. Slichter, et.al., The Impact of Collective Bargaining on Management (Washington, The Brookings Institution, 1960).

Unions in Sweden and to some extent in Britain, are concerned with employment security, but there is much less emphasis on internal mobility and the structuring of internal labor markets.[2] Indeed in Sweden, alone among the countries studied, the trade union movement has committed itself to a policy of promoting economic advancement through external labor market mobility.[3]

Bargaining Structure

Differences in trade union philosophy and their effect upon low pay can be traced to three elements in the industrial relations system of each country: (1) the extent of trade union organization; (2) the mix between craft and industrial unionism; and (3) the degree of centralization in bargaining.

When trade unions represent a limited constituency in the labor market, especially in the higher paying and often more highly concentrated industrial sectors, it is strategically sound to pursue policies oriented towards extending the employment advantages already inherent in those sectors. Whether this entails direct control over access to employment and training (as in some craft unions in the U.S.), or the ex-

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1. See Taira, op. cit., p. 169.

2. See Slichter, "The American System of Industrial Relations ...", op. cit., and G. Rehn, "Unionism and the Wage Structure in Sweden", in J.T. Dunlop (ed.) The Theory of Wage Determination (London, Macmillan and Co., 1964) pp. 222-237.

3. See Rehn, op. cit. and R. Meidner, "The Employment Problems of Individuals and Groups" in the Proceedings of the International Conference on Automation, Full Employment, and a Balanced Economy, Rome 1967.

pansion of employment security and promotion opportunities for incumbent employees (as in industrial unions in the U.S. and Japan), the result tends to be an increased distinction between those inside and those outside the union-influenced system. This bargaining strategy creates benefits for union members and shifts some of the costs to non-members.

However, when union coverage is wide, as in Sweden, it is politically more difficult to enhance the economic conditions of one group at the expense of another. In this case, the union movement is more likely to adopt market-wide, rather than enterprise-based, strategies to improve the economic position of its members.[1]

Similar reasoning applies to the analysis of bargaining structures. Enterprise unionism favors the exploitation of differences in ability to pay among firms and the building of economic security within the enterprise bargaining unit. Linkages with the external market are discouraged because the union's direct bargaining influence and control does not extend beyond the boundaries of the firm.[2] Centralized and industry-wide bargaining, however, must consider the economic interests of larger groups of workers. This encourages approaches to economic security and advancement that may encompass many enterprises.

The effect of industrial unionism upon low pay depends upon other features of the industrial relations system. For example, industrial bargaining frequently is thought to favor more egalitarian distribution of employment and earnings than does craft bargaining.[1] Industrial unionism also permits more upward skill mobility within the enterprise than does craft unionism, and this has been a feature of factory unionism in the U.S. and Japan.[2] For these reasons, where unionism is widespread, industrial-type bargaining will presumably ameliorate the economy-wide effects of duality. Where it is limited in coverage, however, and particularly where it is enterprise-based, duality is likely to be sharpened by membership pressures for internal market structuring, reinforced by the opportunity for upward mobility that industrial unionism provides.

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[1] See Rehn, op. cit., pp. 228-229.

[2] See Slichter, "The American System of Industrial Relations," op. cit. and G. Rehn, op. cit.

Duality and Internal Mobility

From this perspective, it is clear that union activity mainly affects industrial relations arrangements in the primary sector, where the opportunities for reorganizing and exploiting employment conditions are greatest; not in the secondary sector, where competitive product and labor market forces are strongest. It is this asymmetry in union activity that exacerbates market duality. Thus, in the industrial relations system of Japan, where only one-third of all paid labor is in the large (and often unionized) firm and where bargaining is enterprise-based in industrial units, is found an extreme example of market duality based upon internal promotions.

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[1] See G. Rehn, op. cit.; L.G. Reynolds, "The Impact of Collective Bargaining on the Structure of Wages in the U.S."; B.C. Roberts, "Trade Union Behavior and Wage Determination in Great Britain"; and H.A. Turner, "Inflation and Wage Differentials in Great Britain," all in J.T. Dunlop (ed.) The Theory of Wage Determination, op. cit.

[2] See Slichter, "The American System of Industrial Relations," op. cit.

In the United States, as mentioned earlier, two patterns are present in the primary labor market. Some workers advance through the external market by acquiring general training on the job and transferring from employer to employer in search of higher earnings. While there is as yet little information on the number of persons advancing through external mobility, it seems that this path is dominant among younger workers moving from secondary to primary employment, among certain occupations such as chefs and construction workers, and among a small number of highly talented individuals. More common is the internal promotion ladder, in which a worker follows an upward skill and earnings path within a single enterprise during the bulk of his adult worker life.

In Great Britain, the system appears mixed, much along the lines of the United States, whereby some workers advance through job changing while others advance internally. But there are important differences. On-the-job training and enterprise-specific skills are important, but the stronger apprenticeship tradition in British industry probably sustains a degree of generality in training not prevalent in the United States. The strength of craft unionism in British industry also favors reliance upon apprentices in preference to upgrading the semiskilled.

The employment relationship in Britain is founded formally on individual rather than collective contracts, so that rights to employment, the use of seniority in promotion and redundancy decisions, and contractual obligations to promote internally are not formally codified to the same extent in

British industry as they are in the United States.[1] In addition the promotion ladders of unskilled and semi-skilled workers are truncated in industries where the craft tradition is strong. For craft workers, however, there are dual mobility paths available, either within the enterprise or through external mobility.

As a result internal labor markets in Britain are not generally as fully structured nor as sharply delineated, on balance, as they are in the United States and Japan. But even though British factories may not have the long internal promotion ladders found under industrial unionism in the U.S. and Japan,production workers manage to obtain considerable internal earnings improvement by other means. These include assignment to jobs with looser piece rates, more regular overtime, and other opportunities for obtaining premium pay. Recent enterprise research in England suggests that the search for higher earnings leads to considerable lateral movement within skill categories as an alternative to moving along a skill ladder.[2]

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1. See Mackay op. cit., p. 23 and Frederick Meyers, The Ownership of Jobs: A Comparative Study. (Los Angeles, Institute of Industrial Relations, University of California, 1964). Meyers stresses that while British unions may have taken an official interest in such questions, shop-stewards do negotiate informally about job security.

2. See D. Gowler and K. Legge, "Skill and Lateral Mobility in the Internal Labor Market" (OECD, 1972) and J. Fyfe, "Research into Aspects of Characteristic and Behavior Within a Firm" (OECD, 1972).

While the primary labor markets in the U.S. and Great Britain seem to follow variants of the Japanese system of economic mobility within the enterprise, the Swedish industrial relations system is organized much more around promoting economic advancement through the external labor market. The "solidaristic" union wage policy has been part of a deliberate attempt to reduce wage differentials at the cost of accelerating the dislocation of labor from lower paying or less productive enterprises and has been combined with an aggressive policy of retraining and relocating those workers who are displaced.[1] Internal labor markets do exist, and internal training and mobility are an avenue of advancement within Swedish industry. But the internalization of labor market functions has been much less a goal or result in the Swedish system of industrial relations than in the other countries studied, and market duality is probably less well defined in Sweden than elsewhere.

IV. Summary

In drawing together the various strands of the analysis, there appears to be sufficient evidence to argue that market duality is present in all the countries studied, regardless of their industrial relations system. Workers with the twin disadvantages of discrimination and low skill are relegated to low wage firms and low skilled occupations. Initially this employment patterns is different in degree rather than kind from that experienced by more advantaged workers since young workers seem generally to start work in low paying jobs. But as employment experience grows, the earnings patterns of various groups begin to diverge.[1] Well-educated males, the group most characteristic of the workers in the primary labor market, experience substantial growth in earnings over time as the result of access to jobs providing skills and productive experience. Well-educated females will typically obtain higher paying employment, but will show lower rates of economic improvement over time. For the poorly educated, and especially females and ethnic minorities, low paid, dead-end employment becomes a long-term condition.

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[1] See R. Meidner, op. cit., and T.L. Johnston, Collective Bargaining in Sweden, Harvard University Press, 1962; Rehn, op. cit., and Anderman, op. cit., pp. 249-251.

In trying to explain this general set of results, market and technological factors, combined with discrimination, seem to be the major unifying forces. The technology of apparel production, of retail sales, and of many types of personal services would seem to impose limitations on the skill content of work, on the amount of on-the-job training that can be acquired, and on the opportunity for promotion within enterprises. Highly competitive product market conditions severely constrain the wages that can be paid in these sectors. When it comes to deciding who should hold these lower paying jobs and during what portions of their working lives, however, education and discrimination are the principal allocating forces.

But within this general framework there are important differences among countries in the sharpness of the distinction between the primary and secondary sectors, and in the relative economic differentials separating the two sectors. In a gross way this can be illustrated by differences in the earnings dispersions among the countries, and by differences in the steepness of the age-earnings profiles in their primary sectors.

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[1] See M. Friedman, *The Process of Work Establishment*, A.I. Kohen and H.S. Parnes, *Career Thresholds*, J.R. Shea, *et. al.*, *Years for Decision*, and OECD, *Wages and Labor Mobility*, *op. cit.* See also the data on youth and low pay in Bosanquet, *op. cit.*

In seeking to understand these differences, market factors no doubt play a role that could be assessed if more detailed data were available. On the other hand, the operation of the industrial relations system of each country seems also to be a mechanism which contributes to the observed results.

VI

Summary and Conclusions

I. Unions and Economic Structure

From the case studies and empirical work presented in this report it is apparent that trade unions and collective bargaining can shape the compensation and the opportunities for advancement available to workers. The economic outcome at the workplace of union activity can be divided into three related areas: (1) the effect upon compensation levels, (2) the effect upon lifetime economic advancement, and (3) the effect upon the structure of employment. While trade unions appear to devote much of their efforts to obtaining such benefits through direct bargaining with employers, their success or failure in such endeavors will often depend on the manipulation of economic constraints outside the bargaining relationship. These include the control over entry into the labor market, restrictions on non-union competition, and regulation of product markets, particularly in the organized sector.

The specific economic strategy selected will depend upon the circumstances of each bargaining relationship -- the type of skill, the nature of the production process, and the mechanisms available to regulate product and labor market competition. Where skills are high, as among electricians, plumbers, and printers, unions can seek to control labor markets. In large enterprises, and under technologies that permit on-the-job training progressions, unions can attempt to internalize advancement. Where product markets are concentrated or regulated, unions may seek to operate directly on prices and sales. When these factors are not present, however, economic benefits will be more difficult to obtain. This suggests that craft labor markets, enterprise markets in manufacturing, and service work will each encourage different union strategies, but that conditions in service employment should be less amenable to union activity than in enterprise or craft situations. Where unions are successful in effecting economic change, however, offsetting adjustments may occur in worker quality.

The empirical findings are consistent with this analysis. While unionization generally raises earnings, its effects are particularly strong for those poorly educated workers and for black males who obtain unionized employment. Unionization also improves lifetime economic mobility in craft and production work through adjustments in lifetime earnings profiles and by redistributing employment stability. In services, unionization does contribute to earnings, but the effects are not as large.

A second major finding of the study is that unions affect the larger structure of the employment relationship. In craft employment where work is irregular, unions stabilize work through systematic assignment of apprentices and by providing more regular employment for older workers. In production work, there is evidence of a redistribution of employment instability from the more senior to the less senior. In the building service and health sectors where work is not inherently unstable, longevity-related pay and fringe benefits, along with higher levels of pay and better working conditions, have contributed to the reduction of voluntary turnover. Where the "flatness" of the job structure or a craft-like partitioning of a hierarchical job structure has precluded internal mobility prior to the advent of unionization, however, collective bargaining can produce only small changes in promotion opportunities. Nevertheless, even these constraints upon economic mobility can be relaxed through political activity directed at relieving market pressures.

Inter-country comparisons

A review of the experience with collective bargaining in a number of countries sheds further light upon the relationship among low pay, unionization and upward mobility. It appears that widely different systems of labor markets and industrial relations arrangements yield recognizable patterns of labor market duality similar to those found in the United States. In each country, however, duality does assume a slightly different configuration. In Sweden and Britain it is less sharply delineated than in the United States and Japan. And these differences in duality carry implications for the overall distribution of income and sometimes for the efficiency of the industrial relations system.

II. Industrial Relations and Labor Market Policies

When devising national policies for low pay, two distinct types of labor market and industrial relations strategies can be discerned in the countries studied. The first is to make the labor market more open and competitive by encouraging inter-firm labor mobility and replacing internal promotion systems with career ladders based on external mobility. This approach minimizes the importance of enterprise manpower policies and greatly facilitates the management of the labor market through formal programs operated by government authorities. Training and labor force redeployment combined with policies to stimulate higher wage employment and to narrow wage differentials become the principal policies for dealing with low pay under such an organization as the market.

But there are major drawbacks here as well. Making the labor market more competitive can only be successful in an economy operating permanently at full employment. It is no accident that internalization has been the policy favored by unions and workers in countries such as Japan, Great Britain and the U.S., where unemployment has been a recurring problem. In Sweden, the policy of encouraging a "transparent" market was adopted in the full employment postwar years, but is now coming into question as the spectre of unemployment rises in the country. Workers, particularly when faced with the prospect of unemployment (or with alternative employment at lower pay), will naturally seek to exploit whatever economic advantages they can derive from incumbency in an enterprise. Managers too regard the internal market as an efficient manning device. Making the labor market more competitive may challenge the underlying economic rationality of internal markets by accelerating economic dislocation. When such conflicts occur, labor market policy is likely to be resisted by labor and management at the work place.

The alternative is the internalization of the labor market. This entails enhancing the job security and economic advancement of workers through stabilizing employment and providing promotion opportunities within enterprises. Under this system the enterprise is the critical unit for manpower utilization and training, and economic benefits for the internal work force are determined at the enterprise level. Market competition occurs only at the limited hiring points.

In principle, policies designed to promote more widespread internalization have some merit. Wage differentials would be of limited importance as an allocative device. Vocational training would be primarily the responsibility of each enterprise as most workers would, in effect, start at the bottom of an enterprise training and career ladder. Low pay would be reduced to a "life-cycle" problem for almost all workers, as it is now for those in the primary sector.

The major disadvantage of internalization is that it can create a distinction between those workers who have gained access to enterprises providing good advancement prospects and those who have not. Because these advantages can often be increased over time, this distinction may widen, in essence aggravating the dual market problem. While internalization may naturally emerge in the primary sector it cannot be extended as readily to the secondary sector because of technological limitations on the development of internal advancement procedures. And even in the primary sector it appears that internalization can become so inefficient that employers, sometimes with union acquiescence, seek to escape from it through measures such as subcontracting or the employment of temporary workers.[1] The main problems with internalization, therefore, is not its threat to competitive labor market behavior, but the possibility that it will contribute adversely to duality and inefficiency in the economy.

In the U.S. and Sweden, for example, internal advancement corresponds to movement along skill development ladders. But in Britain and Japan increased pay may or may not be accompanied by increased training and productivity.

Taking Britain as an illustration, there is reason to believe that workers' incentives for internal mobility are often controlled by defective piece-rates and customary opportunities for overtime that may conflict with efficient internal skill progressions. Moreover, craft demarcations and the prevalence of non-promotable "mates" may further encourage inefficient internal mobility patterns by frustrating the training and promotion process. On balance, market duality in Britain, as elsewhere, emerges from the industrial relations rules of the workplace, but the British variant is associated with inefficiency in manpower training and utilization.[1] In Japan, however, the nenkō system is protected against this problem by the quid pro quo of unrestrained management preogatives in job assignment and training. But even in Japan it is obvious that the job structure of even the largest enterprises cannot indefinitely absorb higher skills at a rate consistent with automatic increases in earnings under the seniority pay system. Thus we find examples of labor and management agreeing to a reduction in the proportion of employees on the nenkō system and increased use of casual workers, sub-contractors, and temporary help to circumvent conflicts between pay and skill development systems.

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[1] See, for example, Koji Taira, Economic Development and the Labor Market in Japan, (New York: Columbia University Press, 1970) pp. 181, 186-87, 202.

In Britain, the result of their industrial relations practices is a primary labor market further stratified into broad skill categories, with limited advancement within each category. In Japan, and to some degree the U.S., advancement prospects are excellent for many in the primary sector, but are severely limited for casual workers and those in small firms who bear the brunt of economic uncertainty. In Sweden, the combination of the solidaristic wage policy and the external labor market policy have probably led to a somewhat less stratified market, but not without problems of increased turnover, economic dislocation, and wage drift at the plant level.

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[1] See L. Ullman, "Collective Bargaining and Industrial Efficiency", R.E. Caves (ed.) Britain's Economic Prospects (Washington: The Brookings Institution, 1969), pp. 339, 347-348.

The policy conclusions suggested by this analysis are that the problems of low pay in industrialized countries must be considered in the context of the forces that create internal labor markets and market duality.

Although the internal labor market is not the sole source of economic advancement in the primary sector, it is an important (and probably increasing) factor in the course of industrialization. If low pay is to be remedied, it must involve either the transfer of workers from the secondary to the primary sector, or the restructuring of secondary employment to enable it to provide the upward mobility paths characteristic of employment in the primary sector. In short, a combination of external and internal market policies must be followed.

At the national level both approaches require a policy of continued full employment. This is essential both to increase the opportunities for primary-type, career employment and to discourage the internalization of the labor market solely to protect workers against economic insecurity.

At the micro level, the major responsibility of external market programs directed at the low pay problem should be the transfer of workers from secondary to primary employment. This requires detailed understanding of career paths in the primary sector and how they relate to hiring, training, and mobility. This should permit the form of training, whether on-the-job or formal classroom, to be determined by the structure of internal labor markets and the character of customary career paths in each country. It should also pinpoint the mechanisms leading to employment discrimination. But external market policy must be pursued as a complement to, and not as a competitor of, internal training and advancement systems.

Internalization must focus on both the primary and secondary sectors. To the extent that additional natural training ladders can be developed, small employment units merged, and managerial resources strengthened in the secondary sector, it may be possible to generally reorganize production among peripheral firms so that it more closely approximates industrial organization of the primary sector. This in turn should increase the number of promotion ladders present in the economy.

This study suggests that the presence of collective bargaining in the secondary sector will encourage many of these changes. But because unionization and collective bargaining are least likely to flourish in the secondary sector, it may be necessary to extend the coverage of the NLRA further into the secondary market and to permit more protective union security provisions than are currently allowed. In addition, to prevent union jurisdictions from creating unnecessary barriers to training and mobility, NLRB unit determinations could favor industrial-type units to discourage stratification of markets by occupation. Union mergers and inter-union transfer arrangements might also be encouraged to reduce potential barriers to mobility.

Internalization can also be extended by encouraging revisions in the industrial relations arrangements in the primary sector. Whenever institutional barriers to efficient internal job assignment exist, and whenever payment systems conflict with internal training in the primary sector, something akin to productivity bargaining may be used to improve efficiency while expanding the possibilities for upgrading. Although there is little experience with this approach, two likely areas are a shift from piece-rates to time-rates (so that job bidding and skill development patterns are more likely to correspond) and the encouragement of industrial bargaining units through legislation, union merger, and negotiation so as to avoid craft demarcations and truncated promotion ladders. Finally, the volume of career-type employment opportunities could be increased through the selective stimulation or subsidization of such employment in the public and private sectors.

At this stage in our understanding of labor market behavior it is premature to define the optimal balance, between labor market policies favoring greater competition and those encouraging greater internalization of market processes. The most that can be said is that access to career employment opportunities characterized by internal training and upgrading is an important avenue for raising lifetime incomes not currently available to the low paid adult work force. This argues for considering programs for intervening selectively in the demand side of the labor market alongside more conventional supply-oriented programs of training, information, and labor mobility. These two market strategies are clearly compatible with each other. Internalization can expand the volume of training and career advancement opportunities. External labor market policy can feed workers from the secondary sector into the primary sector and can take responsibility for structural readjustment within the primary sector. Moreover, this approach to integrating public and private labor market policies for the low paid would appear to have the merit of harnessing the training and financial resources of enterprises and unions as well as governments. At the same time, it shifts the focus of policies to equalize earned income away from attempts to narrow the existing structure of wage differentials and toward the somewhat easier task of moving workers through an existing wage structure more equitably over their lifetimes.

Other Sources of Duality

The related sources of market duality--external mobility and market regulation--were beyond the scope of the study, although their influence is implied in much of the analysis. Organizing external mobility more systematically, particular in markets that are now casual or unstable, is one possible area of policy that might be explored. Regulatory activities too, should become part of an enlarged conception of manpower policies. Anti-discrimination activities, pension legislation, social welfare taxation schemes, NLRB unit determinations, minimum wages, and immigration policy all have an impact upon labor market structure and are available, in principle, as instruments of labor market policy.

III. Suggestions for Further Research

The title of the report stresses its exploratory nature. It points to the need for much additional research into the relationship among industrial relations practices, labor markets, and economic structure. This will require study both at the level of the work place and at the level of the national industrial relations system.

Enterprise Level Research

At the enterprise level it is important to know more about how labor market adjustment procedures and innovations in manpower management occur, and how they are affected by collective bargaining. Particularly important are more detailed case studies of enterprises.[1] Such studies are often avoided by students of the labor market, not only because of difficulties inherent in obtaining and interpreting microeconomic enterprise data, but because of the problem of obtaining sufficiently large and diverse samples of experience to permit generalization of the results. There is, however, no substitute for case studies in building confidence in the interpretation of the often-ambiguous results of studies based upon more aggregate labor market statistics; or for providing a check upon uninformed speculation about causality and unexplained results in economic models. More important, by examining economic and sociological behavior as it actually occurs, case studies provide a basis for formulating new and more robust hypotheses about labor market behavior that can later be tested for their generality against more aggregate data.

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[1] D. Gowler and K. Legge, "The Internal Labour Market and the Propensity fo Stay", (OECD, November 1972) and D. Gowler and K. Legge, "Skill and Lateral Mobility in the Internal Labour Market," (OECD, November 1972).

For example, very little is known about the process of innovation and diffusion of micro-adjustment techniques, and how such innovations can be stimulated. We know of management-initiated changes in technology or job content and of instances of worker-induced innovations in training, work operations, and even equipment design. Trade unions too seem to stimulate management reorganization. But the possibilities are potentially vast for increasing the probability of such innovation occurring, while the causal mechanisms are only poorly understood. It is possible, for example, that the structure of internal labor markets--the distinction between open and closed market arrangements--may have an important bearing upon innovation.[1] Do "career-oriented" hiring and promotion patterns encourage more innovation than "position-oriented" systems?[1] Can the strengthening of promotion ladders increase efficiency and innovation in various types of work -- production, managerial, craft, or clerical?

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[1] Wolfgang Armbruster, "Problems in Analysing the Efficient Utilization of Highly Qualified Manpower", (OECD), November, 1972).

Broader questions include: how does employment structure affect wages, income distribution and labor mobility? To what extent does the rate of transaction with the external labor market through turnover, rapid growth, or frequent layoffs, influence wage structures, wage levels, and employment stability? What determines the "market sensitivity" of particular types of workers? Turnover and patterns of job changing are key factors to understanding adjustments on both the demand and supply sides of the market; yet the importance of various factors affecting the job changing propensities or workers has not been well documented. Not only do age, sex and marital status affect job changing, but within these groups some workers may be highly sensitive to earnings while others may place much higher weight upon factors such as the diversity of work, opportunities for social contact, and the absence of bureaucratization at the work place. Such analyses of differences within the work force, and of the trade-offs between wage and non-wage job attractions are an undoubted complement to studies of enterprise behavior.

Internal Labor Markets and Market Duality

Reviewing industrial relations arrangements and their effect upon economic mobility in different countries calls for a rethinking of the role of the enterprise in market duality. The structure of internal promotion and training arrangements within enterprises is important in some instances, but not in others. The presence of relatively long internal promotion ladders in many industries, the effects of industrial unionism, and the long term trend towards rationalizing job and pay structures in the United States, clearly encourage a view of internal labor markets in which economic mobility within the firm is associated with movement from one rung to the next on a *pay* and a *skill* ladder. But different routes to economic mobility in other countries, make it obvious that internal job changing and economic improvement need not always involve such a progression. Instead, advancement may consist of assignment to jobs with lower piece-rates, more regular employment, more attractive working conditions, or improved opportunities for overtime and premium pay. This suggests that patterns of internal labor allocation are generally tied to earnings increases (including non-pecuniary benefits), but that only under certain industrial relations arrangements are these movements also related to skill development.

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[1] Robin Marris, A Managerial Theory of Capitalism (New York: Free Press of Glencoe, 1964). And, Edith T. Penrose, The Theory of the Growth of the Firm (New York: Wiley and Sons, 1959).

Moreover, the enterprise internal labor market is only one contributor to overall market structure, and to the career paths and earnings distributions derived from market operation. Some workers achieve upward economic mobility through job assignment within an internal labor market while others do so by changing enterprises. But workers who are economically mobile tend to share in common the access to relatively well defined career paths. In contrast, workers whose earnings increase relatively slowly over time tend to have less predictable work histories. They may remain employed in dead-end jobs in a single enterprise or may move randomly among similar jobs in a number of enterprises. Longitudinal studies of careers and job changing are essential to discover whether individuals are experiencing patterns of employment that lead to upward mobility or to dead-end employment if the distribution of employment opportunities, of on-the-job training, and of income is to be understood. While this career distinction can be traced to differences in internal labor markets and on-the-job training patterns, the problem, undoubtedly has much more complex origins in social class, access to education, worker expectations and the like. We are clearly just beginning this most important area of exploration; and exploration that may require a major rethinking of the roles of education and of manpower policy as instruments for aiding economic advancement.

In short, as we have expanded our understanding of the internal labor market as a determinant of labor force adjustment and of efficient manpower utilization, we should not neglect the equally important concerns of income inequality and distribution that may arise from its operation. Freely competitive models of labor market behavior can be powerful tools in some areas of labor market analysis, but they are much less well suited to the comprehension of labor market behavior where enterprise-specific training, labor market discrimination, and workplace custom are present. Where these forces lead to market segmentation by enterprise, and by race, sex, or ethnic origin, the strength of competitive models is in measurement and not prescription.

In all these areas, the industrial relations system has an important influence over compensation, mobility paths and the distribution of unemployment, training, and higher-paying jobs. Yet few studies to date have sought to examine these aspects of industrial relations.

Market Regulation

The final theme for research, as for policy, is the much neglected area of labor market regulation. Collective bargaining is one form of regulation, but a much wider range of regulatory activities from minimum wages to "full-crew" laws and import quotas affect economic prospects in the labor market. Economic institutions such as trade unions are active in furthering market regulation in their members' interests. This is clearly an area where questions of economics and politics, of markets and institutions, and of economic distribution coincide. A fuller analysis of the uses and implication of varying forms of such regulation by both market institutions and by governments is needed if the political economy of labor markets and industrial relations is to be understood and translated into labor market policy.

STATISTICAL APPENDIX

United States

Calculations of age earnings profiles and union effects in the United States, as reported in Chapter IV, are based upon data collected in the 1967 Survey of Economic Opportunity. Ordinary least squares techniques were used to estimate the effects of age and unionization upon earnings. The various models controlled for a large number of variables -- sex, race, residential location, health, place of birth, education and so forth -- thought to influence earnings.[1] Most of the models worked well by conventional standards, with about 25-35% of the variation in individual earnings being explained. As usual race, sex, education, unionization and age were highly significant in most of the trials.

Figures 1A, 1B, Table I

Estimating models from which these materials are derived were of the g general form:

Y_i = f(BIRTH, SMSA, REG, HEALTH, AGE, UNION)

where

Y_i = Average Hourly Earnings of worker i

BIRTH = Dummy variable for "living elsewhere at age 16"
SMSA = Dummy variables for 10 major metropolitan areas
REG = Dummy variables for 3 regions
HEALTH = Dummy variable for work related health problems
AGE = Dummy variables for age groups
UNION = Dummy variable for unionization

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[1] For a more detailed discussion of the SEO data and its limitations see the Appendix in R.E. Hall, "Why Is the Rate of Unemployment So High at Full Employment?' Brookings Papers on Economic Activity, No. 3, 1970.

The model was applied to race-sex-education sub-samples of the SEO.

Figures IA and IB report the sum of the constant term plus the coefficients of the age dummies. Table I reports the estimated values of the coefficient of the dummy variable for union membership.

Table II

The estimates of union effectsreported in Table II are derived from a variant of the preceding model in which dummy variables for race and sex are introduced, and which is applied to subsamples of the SEO that are stratified by age and occupation. In this model, the dependent variables are either average hourly earnings per worker or annual earnings per worker, both in logarithmic form. The union effects reported are the coefficients of the union dummy variable and can be interpreted as the relative effect of unionization upon earnings.

The occupational sub-groups are defined so as to contain full-time workers who are likely to belong to distinct labor market categories based upon level of skill, type of training, pattern of employment, and industrial relations arrangements.

Production workers consist of persons at all levels of skill ordinarily working in industrial-type situations, and often represented by an industrial union. These include the following occupational titles used in the 1960 Census.

Forgemen and Hammermen
Linemen and Servicemen
Loom Fixers

Machinists
Metal Molders
Metal Rollers and Roll Hands
Stationary Engineers
Assemblers
Manufacturing Checkers, Examiners
Furnacemen, Smeltermen, Pourers
Manufacturing Graders and Sorters
Metal Heaters
Textile Knitters, Loopers, Toppers
Meat Cutters
Mine Operatives and Laborers NEC
Power Station Operators
Manufacturing Sewers and Stitchers
Textile Spinners

Craft workers are defined as being in those occupations ordinarily considered to be distinct (and often apprenticeable) crafts in which skills are transferable among employment situations and where craft union organization is found. These occupations include:

Boilermakers
Brickmasons, Stonemasons
Cabinetmakers
Carpenters
Compositors and Typesetters
Cranemen, Derrickmen, Hoistmen
Electricians
Electrotypers and Stereotypers
Engravers
Road Machinery Operators
Locomotive Engineers
Locomotive Firemen
Railroad and Can Shop Mechanics and Repairmen
Millwrights
Pattern and Model Makers
Photoengravers and Lithographers
Plumbers and Pipe Fitters
Printing Pressmen and Plate Fitters
Structural Metal Workers
Toolmakers, Die Makers, Setters
Apprentice Bricklayers and Masons
Apprentice Carpenters
Apprentice Electricians
Apprentice Toolmakers and Machinists

Apprentice Plumbers and Pipe Fitters
Apprentice, Printing Trade
Welders and Flame-cutters

Service workers were defined as holding service occupations requiring low levels of skill. These include:

Attendants, Hospital and other institutions
Attendants, Recreation and Amusement
Bartenders
Chambermaids and Maids
Charwomen and Cleaners
Cooks (Except Private Household)
Counter and Fountain Worker
Elevator Operators
Janitors and Sextons
Kitchen Workers (NEC)
Porters
Waiters and Waitresses

Equations pertaining to the total sample refer to the combined total of these three sub-samples.[1]

For the age group 20-24 among craft workers , sample size was too small to operate the full equation so that the results of simpler equation controlling only for education, race and sex are reported.

These equations generally performed well by conventional standards of statistical significance and overall explanatory power, with the exception of the service worker equations where the sample size was small and standard of errors of estimate relatively large. As is common with relatively large micro samples, multicollinearity was not a problem.

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1. Other refinements in the occupational sample were made to exclude some obvious coding errors. Workers with hourly earnings below $.50 and above $20.00 were dropped in the hourly earnings equations as were those earning less than $1,000 and more than $40,000 in the annual earnings equations.

Figures II-V

These figures provide an alternative graphic representative of the results presented in Table II. They are constructed from the age coefficients of models identical to those used in estimating Figures 1A and 1B, except that the samples are stratified into union and non-union groups. The occupational groupings are those described in the preceding section.

Great Britain

The age-earnings estimates for Great Britain reported in Chapter V were derived from an ordinary least squares regression of earnings data grouped for occupation, age and education. These age-earnings estimates were derived by merging educational data by age, sex and occupation groups in the 1961 Census with similarly classified data in the New Earnings Survey, 1970. The data is fraught with statistical difficulties: the occupational definitions are not wholly compatible; the underlying populations and sampling techniques are different in the two surveys, and the data should be disaggregated further by occupation and age. Nevertheless as a first approximation, the results are sufficiently encouraging to merit further work such as with more detailed unpublished data from the 1971 Census and the 1971 Earnings Survey. The data pertains to about half of the labor-force in 1961. Excluded groups include part-time workers, the self-employed, and smaller occupational categories. The estimated equation was of the form:

$$Y_{ijk} = a + b_1 A^1_{ik} + b_2 A^2_{ik} + b_3 A^3_{ik} + b_4 E^1_{ij} + b_5 E^2_{ij} + b_6 E^3_{ij}$$

Where

Y_{ikj} = Median weekly earnings for occupation i, age group j, and "school leaving age" group k.

$A^{1...3}$ = Dummy variables for age groups

$E^{1...3}$ = Dummy variables for "school leaving" age groups

The comparison group (represented by the value of the constant term) is "workers age 15-19 having left school at less than 15 years of age". Separate equations were run for males and females.

Table III reports the estimated values of the additional contribution of age and education to the earnings of the base group of 15-19 year old workers having left school at the age of 15 or earlier. Thus in 1970 a young male, 15-19, having left school at 15 would have earned £14.68 per week (£6.06 + £8.05) and would be expected to earn £25.99 per week (£6.06 + £19.93) around the age of 35. On average, two additional years of education would have contributed another £9.84 per week to earnings during each year of the worker's life and so forth. For females, both education and experience (age) contribute less to earnings than that experienced by males, with the exception of university education, for which the incremental benefits to females seem substantially greater.

The model does not suffer overly from multicollinearity with the highest intercorrelations among the independent variables being .36 for the female equation and .47 for the male equation. An analysis of the residuals did not suggest serious estimation biases resulting from interaction effects, but these were not tested separately.

Estimation biases resulting from unfortunately broad labor force categories cannot be determined, but the results do not seem highly sensitive to various sources of bias in specification or estimation.